

WISCONSIN SPACE GRANT PROGRAM AND CONSORTIUM

CHARTER

A Phase II Program Grant from the
National Space Grant College and Fellowship Program
University Programs Branch
NASA Headquarters
Mail Code FEH
Washington, DC 20546

to

Lead Institution: Carthage College

in cooperation with

Affiliate Members:

Aerogel Technologies, LLC	Spaceport Sheboygan
AIAA – Wisconsin Section	University of Wisconsin-Fox Valley
Alverno College	University of Wisconsin-Green Bay
Astronautics Corporation of America	University of Wisconsin-La Crosse
BioPharmaceutical Technology Center Institute	University of Wisconsin-Madison
Carroll University	University of Wisconsin - Milwaukee
Carthage College	University of Wisconsin-Oshkosh
College of Menominee Nation	University of Wisconsin-Parkside
Concordia University Wisconsin	University of Wisconsin-Platteville
Experimental Aircraft Association (EAA)	University of Wisconsin-River Falls
Great Lakes Spaceport Education Foundation, Inc.	University of Wisconsin-Sheboygan
Kickapoo Valley Reserve	University of Wisconsin-Stevens Point
Lawrence University	University of Wisconsin-Stout
Marquette University	University of Wisconsin-Superior
Medical College of Wisconsin	University of Wisconsin-Washington County
Milwaukee School of Engineering	University of Wisconsin-Whitewater
Orbital Technologies Corporation	Western Technical College
Ripon College	Wisconsin Aerospace Authority
St. Norbert College	Wisconsin Department of Public Instruction
Space Explorers, Inc.	Wisconsin Department of Transportation
	Wisconsin Lutheran College

Signature Copy -- December 17, 1991

Amended -- August 4, 1995; August 17, 1995; January 9, 2002; August 1, 2014

Amended to incorporate additional Affiliate Members -- October 15, 1993; August 23, 1994;
January 10, 1995; October 14, 1996; August 15, 1997; October 15, 1998; July, 2000; July 10, 2008; December 15,
2008; November 2, 2009; March 12, 2010; July 26, 2012; August 1, 2014; August 22, 2016.

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Prologue

This Charter agreement is by and between the Board of Trustees at Carthage College and the participants on the above title page and identified on the final signature pages (or their addenda) as Affiliate Members of the Wisconsin Space Grant Consortium.

Whereas the Carthage College Board of Trustees has received a Phase II Program Grant under the National Space Grant College and Fellowship Program from the National Aeronautics and Space Administration, University Programs Branch, NASA Headquarters (NASA) as part of Title LI of the National Aeronautics and Space Administration Authorization Act of 1988 (Pub. L. 100-147, October 30, 1987, 101 Stat. 869-875, 42 USC 2468);

Whereas the Wisconsin Space Grant Program and Consortium has the goal to share expertise, research, educational and training facilities, and other capabilities in order to facilitate research, education, outreach, and advisory services among a variety of partners in disciplines and fields related to space to increase the current space-related activities throughout the State of Wisconsin;

Whereas the Wisconsin Space Grant Consortium wishes to work in a collaborative manner with a collection of partners throughout the State of Wisconsin in fulfilling the purposes of this Program Grant;

Whereas other institutions, organizations, and associations wish to work in a spirit of cooperation with the Wisconsin Space Grant Consortium, including Consortium Affiliate Members in fulfilling the purposes of the Wisconsin Space Grant Program and to receive the benefits of said membership;

Now, therefore, in consideration of the premises and mutual covenants contained herein, the parties agree as follows:

1. Name

The name of this organization shall be the Wisconsin Space Grant Consortium hereinafter also referred to as the Consortium or WSGC.

2. Purposes

The Wisconsin Space Grant Consortium is hereby formed to administer the Wisconsin Space

Grant Program. The Consortium shall be a Wisconsin-wide network of public and private universities and colleges, industries, non-profit associations, and other entities committed to a coordinated effort in a spirit of cooperation to improving Wisconsin's future development and eminence in aerospace¹ and space-related science, design, and technology.

The purposes of the Consortium are the following:

1. To develop and support a regionally balanced, state-wide cooperating network of universities, industries, and associations with interests and capabilities in aerospace and space-related science, design, and technology, and to link this network with NASA centers, national aerospace associations, national space industry networks, NASA prime contractors, and other agencies with space-related programs and funding possibilities.
2. To advance knowledge and understanding through space-related research at Affiliate Member institutions and through-out the State by stimulating, supporting, and coordinating research programs in existing centers of space-related research and in locations with a strong promise of making a significant contribution to space-related research.
3. To advance and support aerospace, space science, and space-related educational and training programs at State public and private universities and colleges at both the undergraduate and graduate levels.
4. To promote strong science, mathematics, design, and engineering education from elementary through high school level
5. To increase interest and advocacy of national space programs and policy through public outreach activity including broad and prompt dissemination of knowledge and techniques.
6. To encourage and support cooperation in research, education, and outreach programs among universities, industry, and State and local government that impact on space.
7. To encourage and support interdisciplinary,

multidisciplinary, inter-university, and university/industry space research, education, and outreach.

8. To recruit and support the education and training of professionals, especially women, under-represented minorities, and developmentally challenged persons for careers in aerospace and space-related science, design, and technology.

It is the expectation and intent of the Consortium and its Affiliate Members that the Wisconsin Space Grant Program and Consortium will serve as a vehicle for building and maintaining a dynamic relationship within and among the academic, research, industrial, and professional communities in Wisconsin concerned with space science, technology, design, and development. Further, it is expected that these collaborative efforts will facilitate interactions between each Affiliate Member and federal agencies, most notably NASA and its various centers. Subsequently, this unique relationship will strengthen each Affiliate Member's ability to develop space activities in the State of Wisconsin.

3. Membership

Membership in the Consortium--called Affiliate Membership--is open to Wisconsin educational institutions, government agencies or departments, nonprofit associations, and commercial and industrial organizations with interest in aerospace, space science, and space-related activities and which desire to support the purposes of and participate in the activities of the Consortium.

3.1 Requirements for Membership

1. The *Lead Institution* is the institution designated by NASA as the host institution for the Consortium. It shall meet the following conditions:
 - a. agrees to the purposes and provisions of this Charter;
 - b. agrees to and does provide matching support to the Consortium at a minimum level of \$15,000 cash per annum, or a minimum of \$25,000 in-kind contributions per annum that are fully accountable and auditable as being directed to the service of the Wisconsin Space Grant Program, or combination thereof as approved by the Director;
 - c. agrees to and does participate actively by contributing release time for the Director of the Consortium, contributes to the Advisory

Council and each of the Technical Advisory Panels and to the work of the Advisory Council and those Panels;

- d. will assume ultimate decision-making, programmatic, and fiscal responsibility on behalf of the Board of Trustees at Carthage College;
- e. shall provide dedicated space for the Program Office of the Consortium; and
- f. will serve as the certified fiscal agent of the Consortium, empowered to accept funds for and in the name of the Consortium from any legal source.

Carthage College has been designated as the Lead Institution by NASA Headquarters' Division of Educational Programs as of August 16, 2014.

2. *Affiliate Members* of the Consortium are those institutions, government departments, companies, corporations, universities, colleges, associations, or other entities involved in aerospace, space science, or space-related research, education, and/or outreach activities that meet the following conditions:
 - a. agree to the purposes and provisions of this Charter;
 - b. agree to and do provide sources of matching cash or in-kind support to the Consortium at a minimum target level of \$15,000 cash per annum or a minimum target level of \$25,000 in-kind contributions per annum that is fully accountable and auditable as being directed to the service of this Program, or combination thereof on a sliding scale based on number of students, annual grants, contracts, and/or sales, or annual receivables as approved by the Director and affirmed by the Advisory Council;
 - c. agree to and do provide membership dues at a minimum level of \$100-\$500 cash on a sliding scale based on number of students, annual grants, contracts, and/or sales, or annual receivables as approved by the Director and affirmed by the Advisory Council (organizations that are not permitted by federal, state or local statute to provide dues are exempted; waivers may be obtained on a case-by-case basis at the discretion of the Director); and
 - d. agree to and do participate actively and enthusiastically in the Consortium, in part by naming an Institutional Representative who will serve on the Advisory Council and coordinate all WSGC activities for the Affiliate Member institution, and by

providing one or more experts for Technical Advisory Panels and do the work of those Panels.

Benefits of affiliate membership include but may not be limited to: involvement in overall policy direction of the Consortium through serving on the Advisory Council; first access to all communications from NASA and from the Consortium regarding RFPs, grants and contracts, and other matters; having certain rights to any significant new technology or invention developed under WSGC funding per Section 7.1 below; having access through the Consortium scholarship and fellowship process to student scholarships, fellowships, and other awards as may become available; receiving the newsletter of state-wide space opportunities; access to all Consortium sponsored forums, conferences, and seminars; opportunities to share, through user group meetings, results achieved by other Affiliate Members and grantees; opportunities to work with other Consortium Affiliate Members in research and education; and other benefits as may be developed by the Consortium.

Other Affiliate Members may be added from time to time in accord with the above conditions and below procedures.

3.2 Addition, Withdrawal, and Removal of Affiliate Members

Affiliate Membership in the Consortium is by written application to the Director, including information pursuant to the above requirements. Admission of new Affiliate Members shall be approved by the Director with the concurrence of the Advisory Council.

An Affiliate Member (except for the Lead Institution) may withdraw from the Consortium by filing a written notice of withdrawal with the Director. Such notice should be filed as early as practical, preferably with three months notice (i.e., on or before January 30 of any given year), but with at least two months notice (i.e., before March 1 of any given year) and will be effective on the last day of April (the end of the NASA Space Grant College and Fellowship Program fiscal year).

An Affiliate Member (except for the Lead Institution) may be removed from the Consortium by the Director with not less than three months notice for not fulfilling the above requirements of Affiliate

Membership of the Consortium, for conduct which constitutes a conflict of interest or which is inconsistent with the goals and objectives of the Consortium, for unilateral positions taken that are in conflict with this Charter, or for other causes, in each case with the concurrence of not less than two-thirds of the Advisory Council.

The Lead Institution may be changed only by an action of Carthage College with the concurrence of NASA. The Advisory Council may recommend a change in the Lead Institution for the Consortium by a two-thirds vote. Final approval of the change requires the concurrence of Carthage College and NASA.

In the event NASA should terminate the Program Grant, written notice will be given to all Affiliate Members, who will be reimbursed for actual approved and expended costs to the date of cancellation. If termination should occur to an Affiliate Member, any cash contributions already made to and committed or expended by the Consortium by the date of termination will remain with the Consortium. Other cash contributions given to the Consortium but not actually committed or expended will be returned to the former Affiliate Member. It is a policy of NASA, to be upheld by the Consortium, that in the event of any termination, grant funds as may be required by the grantee to meet commitments which, in the judgment of NASA and the Consortium, had become firm prior to the effective date of termination shall not be withdrawn (e.g., fellowship commitments made at the beginning of the academic year but paid in installments).

The Consortium, through recommendation of the Advisory Council, may alter these categories or create other categories of affiliate membership, with appropriate contributions of matching funds, responsibilities, and benefits.

4. Program Components

The Wisconsin Space Grant Program will provide leadership together with supporting funds for space-related activities in research, education, and outreach, for supporting students through scholarships, fellowships, and other student awards, and for maximizing the involvement of women, under-represented minorities, and developmentally challenged persons in space-related science, design, and technology.

To accomplish the purposes of the Space Grant Program, the Consortium will have at least seven program components (in no implied order): (1) research; (2) higher education; (3) outreach (pre-college and general public/external relations); (4) scholarships, fellowships, and other student awards; (5) industry; (6) special initiatives; and (7) overall program management.

4.1 Research Programs

The Research Programs will encourage, support, and further enhance the State's current aerospace, space science, and space-related R&D capabilities and infrastructure. Emphasis will be given to interdisciplinary research, to encouraging entry into space research by students in Wisconsin schools, colleges, and universities, and to capitalizing on the breadth of programs existing within the State of Wisconsin. Research in a wide variety of contributing disciplines will be stimulated, supported, and coordinated, where practical, in order to enhance the State's contribution to the nation's space research, design, and technology capability.

An Associate Director for Research, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel on Research, will develop an Annual Tactical Plan (ATP) to assist affiliated colleges and universities, industrial partners, industrial affiliates, and other entities within the State to further develop research, both basic and applied, and both in traditional aerospace, space science, and space-related disciplines and in emerging interdisciplinary areas. The role of the Associate Director for Research will be to stimulate, support, and coordinate through grant activities and other tasks as may be proposed under this program such development across the State. Ensuring support for the development of sufficient NASA-funded research at universities or colleges to meet NASA standards for possible future Space Grant College designation shall be a prime objective of this program. Developing a regionally balanced, state-wide network of state and private universities and industries with capabilities in space-related scientific, design, and technological research will also be a primary objective of this program.

4.2 Higher Education Programs

The Higher Education Programs will stimulate, support, and help coordinate aerospace, space

science, and space-related higher education programs across the State and help expand current college and university programs in aerospace and space-related education at Affiliate Member institutions. Goals include support for the development of one or more accredited degrees in aeronautical and astronautical engineering and advocacy for the development of other space-related courses, curricula, and degree programs in a wide variety of disciplines at state colleges and universities.

An Associate Director for Higher Education, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel on Higher Education, will develop a tactical plan to assist affiliated universities and colleges, with cooperation from industrial affiliates and other entities within the State, to enhance aerospace, space science, and space-related education. The role of the Associate Director for Higher Education will be to stimulate and support such development across the State. Ensuring support for the development of sufficient aerospace and space-related educational programs at universities or colleges to meet NASA standards for potential future Space Grant College designation shall be a prime objective of this program and office. Developing a regionally balanced, state-wide network of state and private universities with aerospace and space-related educational capabilities will also be a primary objective of this program.

4.3 Outreach Programs

The Outreach Programs will aim to raise the general level of pre-college and public awareness in aerospace, space science, and space-related science, design, and technology in the State, and to increase interest, recruitment, and training of the next generation of students in the pursuit of space-related science, design, and technology. Goals include increasing the knowledge of the general public on potential benefits of aerospace, space science, and space-related science, design, and technology; supporting the pre-college development of math, science, and design curricula K-12; and encouraging high school, secondary, and elementary students in space-related pursuits.

One or more Associate Directors for Outreach, e.g., Pre-college Outreach and/or General Public Outreach, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel on Outreach, will develop tactical plans to advance national and Wisconsin

space programs and policy through a variety of pre-college and general public outreach activities. The role of the Associate Director(s) for Outreach will be to stimulate and support this development across the State. Involving a regionally balanced, state-wide network of state agencies, industrial and non-profit organizations, and other aerospace associations in this effort will be a primary objective of these programs.

4.4 Scholarship, Fellowship, and Other Student Awards Programs

The Scholarship, Fellowship, and Other Student Awards Programs will use NASA funds together with matching funds from Affiliate Members to support exceptional undergraduate and graduate students pursuing aerospace, space science, and space-related careers. The Wisconsin Space Grant Scholarship, Fellowship, and Other Student Awards Programs will be underwritten on at least a one-to-one basis by university, college, and industrial partners and affiliates. While every effort will be made to have private sector contributions undesignated, at the discretion of industrial sponsors, scholarship or fellowship awards may be designated for a college or university, discipline, or special group.

A minimum amount of NASA funds as mandated by Headquarters will be designated for NASA/Wisconsin Space Grant Fellowships and NASA/Wisconsin Space Grant Scholarships. To maximize leverage, geographic distribution, and opportunities for special groups, less-than-full fellowships may be offered to supplement and/or leverage existing fellowships and assistantships at recipient universities or colleges. Summer undergraduate stipends may also be offered for research in space sciences. In order to keep administrative costs to a minimum, and in line with NASA objectives, no overhead will be charged on Scholarships, Fellowships, or Other Student Awards, and the college or university receiving student support will be asked to partially match NASA's contribution by contributing tuition remission, fringe benefits, or other funds directly supporting the student's activities.

WSGC Scholarship, Fellowship, and Other Student awards will be made available to the most qualified graduate and undergraduate students and will be competitive over all aerospace, space science, and space-related disciplines, but special care will be exercised to insure regional distribution, to encourage interdisciplinary studies, and recruit women, under-

represented minorities, and developmentally challenged persons.

Annual decisions on Other Student Awards will be made by the Director based on recommendations from the Technical Advisory Panel on Other Student Awards.

An Associate Director for Scholarships and Fellowships, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel in Scholarships and Fellowships, will develop a tactical plan to support exceptional undergraduate and graduate students pursuing aerospace, space science, and space-related careers. The role of the Associate Director for Scholarships and Fellowships will be to stimulate and support such development across the State.

Scholarship, Fellowship, and Other Student Award recipients will be expected to make presentations at a subsequent WSGC Conference and/or as part of the Outreach Program, to submit final reports and copies of all published papers, and to engage in the activities of the Consortium as may be deemed appropriate.

4.5 Industry Programs

The Industry Programs will attempt to forge and support linkages between universities and industries in the State for the purpose of improving the aerospace, space science, and space-related industrial/university research and development infrastructure in Wisconsin. Efforts will be made to recruit additional Affiliate Members from the industrial community into the Consortium. A special effort will be made to develop ties to state industry taking an over-the-horizon commercial outlook and achieving synergy between industry and university R&D. Every effort will also be made to have industry provide input to the Consortium regarding basic and applied technology needs and where the Consortium can help Wisconsin industry.

An Associate Director for Industry, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel in Industry, will develop a tactical plan to enhance aerospace, space science, and space-related cooperation and collaboration across the State. The role of the Associate Director for Industry will be to stimulate and support such development across the State.

4.6 Special Initiatives Programs

The Special Initiatives Programs will assist the other programs of the Consortium in the recruitment and training of women, underrepresented minorities, and developmentally challenged persons for careers in space science, design, and technology. Every effort will be made to encourage the appointment of women, minorities, and developmentally challenged persons on the Advisory Council and Technical Advisory Panels and to achieve a broad representation of women, underrepresented minorities, and developmentally challenged persons in the Scholarship, Fellowship, and Other Student Awards Programs.

An Associate Director for Special Initiatives will be responsible for developing and coordinating ideas and program plans that can maximize the involvement of women, underrepresented minorities, and developmentally challenged persons. Implementation will occur in coordination with the other Associate Directors and integrated with their Annual Tactical Plans and/or be developed as one or more stand-alone programs.

4.7 Student Satellite Program

The Student Satellite Program will provide students hands-on, mentored, student-driven experience in designing and flying payloads to a space or near-space environment. Goals include supporting initiatives that create more highly-qualified engineers and engineering-savvy professionals in the state, and expanding aerospace content-rich hands-on opportunities for non-engineering students at Affiliate Member institutions.

An Associate Director for the Student Satellite Program, in consultation with the Director and Executive Committee, and with advice from the Technical Advisory Panel on the Student Satellite Program, will develop a tactical plan to assist affiliated universities and colleges, with cooperation from industrial affiliates and other entities within the State, to provide students hands-on, mentored, student-driven experience in designing and flying payloads to a space or near-space environment. The role of the Associate Director for the Student Satellite Program will be to stimulate and support such development across the State.

4.8 Overall Program Management

Overall Program Management, including all communications with NASA-HQ and with the Advisory Council, development of an overall strategic plan, coordination of self-evaluation including but not limited to increasing collaboration and participation, and all other administrative functions for the Program and Consortium as a whole will be handled by the Director, an Assistant Director, and other administrative staff as may be deemed necessary.

5. Organizational Structure and Management

Carthage College shall serve as the lead and host institution of the Consortium. The host institution shall establish a Program Office and designate a Certified Fiscal Representative responsible on behalf of the Board of Trustees of Carthage College to the University Programs Branch of NASA.

5.1 Organizational Structure

The organizational structure of the Consortium shall be as indicated in the organizational chart on the next page and in the descriptions below.

5.2 Management

The management team for the Consortium will be comprised of a Director, one or more Associate Directors, and an Assistant Director.

1. *Director.* The Director of the Consortium shall be selected and approved by the Provost at Carthage College with the approval of NASA's University Programs Branch. If the host institution should change, the Chancellor or chief executive officer of the host institution shall name the Director of the Consortium.

The Director will be the chief executive officer of the Consortium responsible for overall program direction, coordination, and management of the Consortium. The Director will seek new and continuing industry, university and college, and non-profit aerospace association affiliates and sources of matching funds, will generate new proposals for continuation and expanded funding of the Consortium and its efforts, will monitor all program elements, will direct the Scholarship, Fellowship, and Other Student Awards Programs, will convene in conjunction with one or more Affiliate Member

institutions an Annual Conference of Consortium Affiliate Members and grant recipients to present the results of research, education, and outreach projects funded by the Consortium, will establish a stream-lined process for giving the Program visibility, will initiate a state-wide publication series for the dissemination of results, and will initiate other programs as deemed necessary to meet the purposes of the Consortium. The Director will prepare the annual report of program purposes, progress, and achievements for each fiscal year. With assistance from the staff of the Program Office, the Director will be responsible for the day-to-day management, coordination, and implementation of the Wisconsin Space Grant Program. Only the Director can state the official policy of the Consortium. The Director will work closely with the University Programs Branch of NASA Headquarters in implementing all of these program elements.

2. *Associate Directors.* The Associate Directors will be appointed by the Director and serve at the discretion of the Director. Each Associate Director will be responsible for developing and implementing Annual Tactical Plans and associated activities for one of the program areas of research, higher education, outreach (pre-college and/or general public), industrial relations, special initiatives, and other programs or program areas as may be deemed appropriate by the Director, Executive Committee, or Advisory Council, and will serve to coordinate, proactively stimulate, and support state-wide activities in their programmatic areas.
3. *Assistant Director.* The Assistant Director will be responsible for assisting the Director in the overall management of the Consortium and in any other overall Consortium coordination and/or management tasks as may be deemed necessary by the Director. The Assistant Director is responsible for assisting the Director with program implementation, program data management and reporting, and for working with Associate Directors to ensure alignment between program goals and recruitment strategies.

Each of the above senior personnel report to the Director of the Consortium. If any of the Associate Directors are unwilling or unable to serve in the capacity as stated above, the Director will name a replacement on advice of a majority of the Advisory Council. If the Assistant Director is unable to serve in

the capacity as stated above, the Director will choose a replacement. If the Director is unable to continue as Director, he or she will be replaced by the Provost at Carthage College, the Lead Institution, on advice of the majority of the Advisory Council and subject to NASA approval. If the Director is away for an extended period of time or otherwise temporarily unable to fulfill the duties of the office, one of the Associate Directors will be appointed Acting Director with the advice of the Advisory Council and approval of the host institution Carthage College.

4. *Executive Committee.* The Director, Associate Directors, Chair of the Advisory Council, and Assistant Director shall constitute an Executive Committee responsible for coordinating and reviewing Annual Tactical Plans, soliciting and receiving promising program proposals, initiating program implementation activities around the State, serving as a sounding board for executive actions proposed by the Director, and otherwise supporting the Director's activities.

5.3 Advisory Council

Advice on overall policy direction will be rendered by an Advisory Council which represents the interests of all Affiliate Member institutions and accommodates the needs and objectives of the NASA Space Grant College and Fellowship Program. The Advisory Council will review and advise on overall policy directions, primary budget allocations, and extended strategic plans for the program areas, and provide an overview function for the Space Grant Program. Shifts in Annual Tactical Plans for specific program areas from that suggested by this Charter will be brought to the Advisory Council for review and recommendation.

The Advisory Council will meet at least three times a year, more as needed, to review program evaluations and tactical plans for the succeeding year and to deal with general policy issues.

The Advisory Council shall consist of the CEO or designated Institutional Representative from each of the Consortium Affiliate Member institutions. In order to ensure that each Affiliate has a single vote in all decisions, the Associate Directors will be considered non-voting members of the Advisory Council. The Chair of the Advisory Council shall be elected every two years by the Advisory Council from within the membership of the Council. Any voting or non-voting member of the Advisory Council shall be eligible to serve as Chair. For non-voting members, any election to serve as Chair will

be contingent upon change of status from non-voting to voting member. A quorum shall be two-thirds of the active members, with active being defined as those members who have attended or sent a proxy to at least 50% of all Advisory Council meetings within the last 12-month period. Advisory recommendations shall be based on a simple majority of those present or otherwise voting, except for those issues designated specifically in this Charter as requiring a two-thirds vote. The Director shall be the deciding vote in the case of a tied vote.

5.4 Institutional Representatives

The chief executive officer or equivalent authorized officer of each Affiliate Member institution shall designate an Institutional Representative who shall represent that institution, shall represent the needs and interest of that institution to the Wisconsin Space Grant Consortium, shall be an advocate of Wisconsin Space Grant Consortium at their home institution, shall be the point of contact with the Director for each affiliate, and shall coordinate current and pursue new institutional activities associated with the Wisconsin Space Grant Consortium.

5.5 Technical Advisory Panels

Comprised of leading scientists, engineers, and industrialists from around the State, Technical Advisory Panels (TAPs) will advise on and evaluate progress, programs, and applications in each of the program areas. The membership of the Technical Advisory Panels is selected by the Associate Director responsible for each respective area in consultation with the Director and the rest of the Executive Committee. TAPs will be balanced as much as possible by geographic location, gender, and racial and ethnic background. They will support the efforts of the Director, Associate Directors, and Program Coordinator, may be contacted individually or collectively as appropriate to lend advise and expertise in the development of plans and activities, will review Annual Tactical Plans prior to submission to the Director, will evaluate progress based on Associate Director reports, and will lend their technical and scientific expertise as needed.

5.6 Financial Management

Financial management for the Consortium will be handled by the Lead Institution through the Certified Fiscal Representative of Carthage College in accord

with this Charter and NASA directives and guidelines. All Affiliate Members will be apprised of the financial management of the Consortium, and will receive periodic information with ample opportunity to comment or raise objections. The Advisory Council will also review the financial management of the Consortium on an annual basis.

Financial reimbursement for approved budgetary items shall be handled per Carthage College guidelines on a task cost reimbursement basis in accordance with annual subcontracts, inter-institutional agreements, or other annual agreements.

Each program area will function on its own internal budget based on approval of an Annual Tactical Plan by the Advisory Council and Director, and will be responsible for administration, program costs, and allocations of program funds to other affiliates, organizations, and individuals around the State in line with that approved plan. Each unit will be accountable to the Director and the Certified Fiscal Representative at the end of each fiscal year for progress and successes against that plan and budget. The objectives are to operate programs on as competitive a basis as possible, to maximize expenditures directly on productive activities and promising organizations around the State, to maximize the leveraging potential of NASA funds, and to provide accurate fiscal accountability.

6. Annual Agreements

The year-to-year operation of the Consortium will be administered within the guidelines of this Charter by a series of separate annual agreements between the Director and official signing authorities of Affiliate Member institutions, or other parties, charged with carrying out parts of the overall programmatic plan of the Consortium. These agreements shall be made and signed prior to the start of each new NASA Space Grant College and Fellowship Program fiscal year (i.e., before April 23) based on agreed-upon Tactical Plans for the different programmatic areas. They will be prepared by the Consortium and may take the form of inter-institutional agreements, subcontracts, letters of agreement, or memoranda of understanding outlining scopes of work, matching commitments from Affiliate Members, each with attached budgets, and will be framed to be easily updated on an annual basis.

Annual Tactical Plans (ATPs) will be developed each year of the Program for each programmatic area

by the responsible Associate Director in consultation with the Director and Executive Committee and in accordance with the Director's guidelines as to organization and budget limitations. The Associate Directors will be responsible for submitting Annual Tactical Plans for each of the major functional areas--research, higher education, outreach, industry, special initiatives, and other programs as may be developed. Annual Tactical Plans will also be developed for the Scholarship, Fellowship, and Other Student Awards Program, Annual Conference, and any other special programs developed by the Director and Program Office. Other parties may be invited to submit Annual Tactical Plans as decided by the Director on recommendation of a majority of the Advisory Council.

Technical Advisory Panels will assist the Director and Associate Directors in the development of these tactical plans, will review them, and will recommend them for approval by the Director. They will then be reviewed and approved by the Director with advice as needed from the Advisory Council relative to the overall objectives of the Consortium and the NASA Space Grant College and Fellowship Program.

Prior to the end of each NASA Space Grant College and Fellowship Program fiscal year (the end of April), each Associate Director, and the Program Office for the Scholarship, Fellowship, and Other Student Awards Program, shall submit to the Director an end-of-fiscal-year Evaluation keyed to the goals, tasks, timetable, budget, and evaluation plan for that year. This report shall also include revised goals and tasks and a proposed Annual Tactical Plan for the succeeding year. These evaluations and tactical plans shall be submitted to the Director no later than one month before the end of the fiscal year (i.e., by March 30) of each year of the Program, or earlier if required by NASA Headquarters. The Director will convene an Executive Committee Meeting to discuss the pre-eding year and plans for the following year, and will forward these to the Advisory Council and seek their evaluation of past year's performance and advice on proposed Annual Tactical Plans.

7. Other Terms and Conditions

7.1 Intellectual Property Rights

Any person or institution, "Funded Entity," supported by funds from the Consortium agrees to credit the Wisconsin Space Grant Program in all

publications.

Any Funded Entity supported by funds from the Consortium agrees to notify Carthage College in a timely fashion of any inventions conceived or reduced to practice as part of the research conducted with these funds. Any Funded Entity supported by funds from the Consortium shall own any intellectual property developed with these funds. The Funded Entity shall follow its standard policies and procedures in evaluating and pursuing intellectual property protection and every effort shall be made to commercialize it. If the Funded Entity or any sub-awardees opt not to pursue commercialization, the WSGC will be given the option to pursue it.

In the case where joint funding between WSGC and an Affiliate Member has underwritten research leading to an invention and patent, the parties shall negotiate together a suitable arrangement at the time of disclosure.

7.2 Confidential Receipt of Information

The Consortium is committed to the dissemination and useful directed sharing of information. All activities funded by the Consortium will have some level of documentation available to the entire Consortium membership.

From time to time, the Affiliate Members of the Consortium may provide certain reports, drawings, compilations of information, and other materials as needed for and provided for above. In the event any of these written or drawn materials are marked "confidential" or "proprietary," the other parties of this Consortium agree not to transfer or disclose them to third parties. In any event, information shall not be deemed confidential with respect to any Affiliate Member if it was already in the Affiliate Member's possession when first supplied through this Consortium, if it is in or comes to be in the public domain through no wrongful act of any Affiliate Member, or a third party having a right to do so independently supplies it to any other Affiliate Member. The obligation to hold such reports, information, drawings, or materials confidential shall extend for no more than three years from the date of receipt thereof by the receiver. Even though subject to copyright, writings or drawings so supplied may be freely copied with formal and complete attribution to their author and institution by any Affiliate Member solely for use and distribution on a need-to-know

basis for fulfilling the purposes of this Consortium Charter and subsequent annual agreements within the receiver's organization.

7.3 Advice, Endorsements, Sponsorship, and Support for Programs

The Consortium, its Director and Associate Directors, and its Technical Advisory Panels may from time to time be invited to investigate state space-related issues and offer advice and recommendations to state entities requesting advice. All such requests for advisory services, reports, papers, or advisory letters on behalf of WSGC will be submitted to the Director for review prior to being conducted and again prior to being released to the requesting agency or the public.

Similarly, the Consortium and its entities may be asked to endorse, support, sponsor or co-sponsor space-related programs around the State and elsewhere. All such requests shall be reviewed and cleared by the Director before being initiated.

In both such cases, the Director shall be guided by the purposes and terms of this Charter, and will report such endorsements and advisory positions taken at the next Advisory Council meeting. If any request falls outside current guidelines, the Director will consult with the Executive Committee before offering an opinion, and if any request falls outside current WSGC policy, the Director will consult with the Advisory Council before rendering a decision.

7.4 NASA Policies and Procedures for Administering Training Grants

The administration of the Wisconsin Space Grant Program and Consortium is the responsibility of Carthage College in accordance with established institutional policies, and is also subject to "NASA Policies and Procedures for Administering Training Grants," documentation for which is available from the office of the Certified Fiscal Representative. Three relevant portions are transcribed in the next three paragraphs.

All grantees to this Charter grant to the Government, for Governmental purposes, the right to publish, translate, reproduce, deliver, use, and dispose of, and to authorize others to do so, all data, including reports, drawings, blueprints, and technical information resulting from the performance of work

under the master grant to Carthage College and this Charter.

NASA Training Grants are subject to the provisions of 14 CFR 1265, Government wide Debarment and Suspension (Nonprocurement) and Government-wide Requirements for a Drug-Free Workplace (Grants), unless accepted by paragraphs 1265.110 or 1265.610.

NASA grants and agreements are subject to the provisions of 14 CFR 1271, "New Restrictions on Lobbying" including that no federally appropriated funds will be used for any form of federal lobbying.

8. Adoption, Amendments, and Period of Agreement

Strongly embracing the objectives of the National Space Grant College and Fellowship Program, the undersigned have entered into agreement to create a consortium of universities and colleges, private industry, and non-profit organizations in a coordinated effort to help maintain and enhance America's leadership and Wisconsin's future in science, design, and technology impacting on space.

This Charter shall be adopted and become effective upon receiving written approval of at least eighty percent (80%) of the Consortium Charter Member and Affiliate Member institutions.

Any new requirements by NASA will be represented automatically in amended versions of this Charter. The Charter may be further amended upon the vote or written approval of the institutional representatives of two-thirds of the then Affiliate Members subject to the provision that such amendments may not violate policy of NASA, the National Space Grant College and Fellowship Program, or Carthage College.

This Charter covers the period of time of Years 2 and 3 of the NASA Phase VI Grant to Carthage College, namely April 23, 2016 to April 22, 2018, but will remain effective, with amendments, as long as two Affiliate Members remain in the Consortium.

The undersigned understand that the Affiliate Membership in this Consortium does not constitute a legal entity. The signers (and other Affiliate Members joining the Consortium at later times) agree that individuals representing institutions or corporations

remain the employees and agents of those entities and do not become employees or agents of NASA, Carthage College, or other Affiliate Member of the Consortium for any purpose.

This Charter is declared effective upon the date of the signature of the party making the total at least eighty percent (80%) of the Affiliate Member institutions. The parties each have duly executed this

Charter on the date or dates indicated on the next page.

On behalf of our organization, we hereby pledge our support to the National Aeronautics and Space Administration National Space Grant College and Fellowship Program as Affiliate Members of the Wisconsin Space Grant Program and Consortium.

Charter Members:²

For the Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin-Milwaukee

George W. Keulks
Dean, Graduate School and Research
Date _____

Gary T. Moore
Principal Investigator and Director
Date _____

For the Astronautics Corporation of America

Nathaniel K. Zelazo
Chief Executive Officer
Date _____

For Marquette University

Lynn E. Miner
Associate Dean, Graduate School and Office of Research Support
Date _____

For the Board of Regents of the University of Wisconsin System
on behalf of the University of Wisconsin-Madison³

Robert W. Erickson
Director, Research Administration--Financial
Date _____

Affiliate Members:

For Lawrence University

James D. Dana
Dean of the Faculty

Date _____

For the Medical College of Wisconsin

William R. Hendee
Senior Associate Dean, Office of Research and
Technology

Date _____

For the Milwaukee School of Engineering

Thomas W. Davis
Senior Vice President of Academics and Dean of
Faculty

Date _____

For St. Norbert College

James R. Hodgson
Chair, Division of Natural Sciences

Date _____

For the Board of Regents of the University of
Wisconsin System on behalf of the University of
Wisconsin-Green Bay

David Outcalt
Chancellor

Date _____

For the Board of Regents of the University of
Wisconsin System on behalf of the University of
Wisconsin-La Crosse

Nancy L. Sorenson Interim Dean, College of
Education

Date _____

9. Addenda

The Charter Members of the Consortium were:

Lead Institution
University of Wisconsin-Milwaukee
University Members:
Marquette University
University of Wisconsin-Madison
Industrial Members:
Astronautics Corporation of America
Orbital Technologies Corporation
Non-Profit Member:
Wisconsin Space Institute

The Charter Affiliate Members of the Consortium were:

Beloit College
Lawrence University
Medical College of Wisconsin
Milwaukee School of Engineering
St. Norbert College
University of Wisconsin-Green Bay
University of Wisconsin-La Crosse

1. Ripon College requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on January 3, 1992.
2. Carroll College requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on May 4, 1992.
3. Beloit College, a Charter Affiliate Member of the Consortium, withdrew from Affiliate Membership by letter to the Director effective the last day of February 1993.
4. Northland College requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on March 9, 1993.
5. The Wisconsin Space Business Roundtable requested Affiliate Member status in the Consortium and was approved by 2/3rds majority vote of the Advisory Council on March 9, 1993.
6. The University of Wisconsin-Green Bay, a Charter Affiliate Member of the Consortium, withdrew from Affiliate Membership by letter to the Director on October 14, 1993, effective on the last day of February 1994.
7. The Wisconsin Space Institute, a Charter Member of the Consortium, withdrew from Membership by letter to the Director on February 26, 1994, effective on the last day of February 1994.
8. Orbital Technologies Corporation, a Charter Member of the Consortium, withdrew from Membership in the Consortium on November 30, 1994.
9. The University of Wisconsin-Parkside requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on December 12, 1994.

10. The State of Wisconsin Department of Public Instruction requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on December 15, 1994.
11. The University of Wisconsin-Green Bay requested reinstatement as an Affiliate Member in the Consortium and was approved by unanimous vote of the Advisory Council on December 15, 1994.
12. The University of Wisconsin-Whitewater requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on December 15, 1994.
13. Marquette University, on leave-of-absence for the 1993-94 fiscal year, re-committed itself to the Consortium and was reaffirmed in full Member status on December 19, 1994.
14. The State of Wisconsin Department of Transportation requested Affiliate Member status in the Consortium and was approved by unanimous vote of the Advisory Council on February 21, 1995.
15. All Members and Affiliate Members, except for the Lead Institution, were named Affiliate Members by action of the Advisory Council on August 17, 1995.
16. Northland College requested and was granted a one-year leave of absence from Affiliate Member status for 1996-97 on June 10, 1996.
17. Alverno College requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on October 14, 1996.
18. The College of Menominee Nation requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on October 14, 1996.
19. The University of Wisconsin-Oshkosh requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on March 15, 1997.
20. The Wisconsin Association of Cooperative Educational Service Agencies (CESA) Administrators requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on March 15, 1997.
21. Northland College requested to withdraw from the Consortium on August 14, 1997.
22. St. Norbert requested to withdraw from the Consortium in August 1998.
23. Orbital Technologies Corporation requested to rejoin the Consortium with affiliate member states and was approved by unanimous vote of the Advisory Council on November 15, 1998.
24. Space Explorers, Inc. requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on July, 2000.
25. Great Lakes Spaceport Education Foundation, Inc requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on April 2002.
26. Wisconsin Lutheran College requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on December 2003.
27. The University of Wisconsin-Superior requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on January 2004.
28. BioPharmaceutical Technology Center Institute requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on July 8, 2004.

29. AIAA – Wisconsin Section requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on September 2004.
30. Western Technical College requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on November 2005.
31. Aerogel Technologies, LLC requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on February 14, 2005.
32. The University of Wisconsin-Fox Valley requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on February 2005.
33. Carthage College requested Affiliate member status and was approved by unanimous vote of the Advisory Council on February 2006.
34. Spaceflight Fundamentals, LLC requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on July 2007.
35. The University of Wisconsin-Sheboygan requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on November 2007.
36. Wisconsin Roundtable Assn. became inactive from the Consortium in January 2008.
37. The University of Wisconsin-Stout requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on March 2008.
38. St. Norbert College requested to rejoin the Consortium with affiliate member states and was approved by unanimous vote of the Advisory Council on July 2008
39. Experimental Aircraft Association (EAA) requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on October 2008.
40. The University of Wisconsin-River Falls requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on October 2008.
41. Space Education Initiatives requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on March 2009.
42. Wisconsin Aerospace Authority requested Affiliate Member status and was approved by unanimous vote of the Advisory Council on April 2009.
43. KT Engineering requested to withdraw from the Consortium in December 2009.
44. UW-Platteville requested Affiliate Member status and was approved by vote of the Advisory Council in February 2011.
45. Spaceport Sheboygan requested Affiliate Member status and was approved by vote of the Advisory Council in May 2011.
46. Concordia University Wisconsin requested Affiliate Member status and was approved by vote of the Advisory Council in May 2012.
47. Wisconsin Association of CESA Administrators requested to withdraw from the Consortium in July 2012.

48. Crossroads at Big Creek requested Affiliate Member status and was approved by unanimous vote of the Advisory Council in October 2012.
49. The University of Wisconsin-Stevens Point requested Affiliate Member status and was approved by unanimous vote of the Advisory Council in October 2012.
50. Kickapoo Valley Reserve requested Affiliate Member status and was approved by unanimous vote of the Advisory Council in August 2014.
51. The University of Wisconsin-Washington County requested Affiliate Member status and was approved by unanimous vote by the Advisory Council in November 2014.
52. Spaceflight Fundamentals, LLC requested to withdraw from the Consortium in August 2016.
53. Crossroads at Big Creek requested to withdraw from the Consortium in August 2016.

Endnotes

1. In conformance with NASA usage (Cf. 14 CFR Part 1259.101), “aerospace” herein means any academic discipline or field of study (including but not limited to aeronautics, space science, space architecture and design, the physical, natural, and life sciences, engineering, space technology, medicine, education, economics, sociology, communications, planning, law, international affairs, public administration, and related fields) which is concerned with or likely to improve or have impacts on the understanding, assessment, development, and/or utilization of space.
2. These were the original Charter Members and Affiliate Members of the Consortium. Their signatures were collected on individual review copies of the Charter and are available on request. Additional Affiliate Members have been added per the list appended in Section 9, Addenda.
3. Subject to counter-initialed changes agreed to by Gary Moore on April 7, 1992 on pages 12 through 15, and the April 7, 1992 Memorandum from Associate Dean Marvin Ebel of the UW-Madison Graduate School to Associate Dean Robert Jones of the UW-Milwaukee Graduate School, which are incorporated into the charter by attachment.
4. Intellectual Property provisions in Sec. 7.1 modified by unanimous consent to reflect policy recommendations of UW-LaCrosse at the August 2016 meeting of the Advisory Council.