

# **N MATERIAL™ ADVANTAGE**

The Student Program for Materials Science and Engineering

## 2014-2015

# Material Advantage Student Chapter Handbook

[www.materialadvantage.org](http://www.materialadvantage.org)



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**MATERIAL ADVANTAGE**  
ACerS, AIST, ASM International and TMS Student Program

**2014-2015 CHAPTER HANDBOOK**  
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## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International, and TMS Student Program

### **HISTORY**

A student membership in ASM International (hereafter ASM) and The Minerals, Metals & Materials Society (hereafter TMS) was established by action on both organizations in 1962. No record of the original Student Member Agreement can be located at ASM or TMS Headquarters. A new agreement was drafted in 1986 for the purpose of outlining organizational responsibilities of ASM and TMS to the Student Membership Program. The establishment of ASM and TMS Student Chapters was approved in principle by the ASM Board of Trustees at its March 1987 meeting and by the TMS Board of Directors at its January 1988 meeting. In 2004, a resolution by The American Ceramics Society (hereafter ACerS) Board brought the third Society into the ACerS/ASM/TMS Student Program. In June 2005, a resolution by the Association for Iron and Steel Technology (hereafter AIST) brought the fourth organization into the ACerS/AIST/ASM/TMS Student Program (hereafter referred to as the Material Advantage Student Program).

As part of this action, requirements for chartering and operation of Student Chapters were also established and subsequently agreed to by ACerS, AIST, ASM and TMS (hereafter referred to as the Partnering Societies).

### **ACerS MISSION**

The American Ceramic Society is a global leader among professional organizations in supporting scientific research, emerging technologies, and current applications, in which ceramic materials are a key element.

### **AIST MISSION**

The mission of the Association for Iron & Steel Technology is to advance the technical development, production, processing and application of iron and steel. Our principles are to provide:

- Value for members and benefit to industry
- Opportunity and access for all members
- Member-identified, quality programming
- Universal industry appeal

The mission of the AIST Foundation is to ensure the iron and steel industry of tomorrow will have a sufficient number of qualified professionals.

### **ASM INTERNATIONAL MISSION**

ASM International is a Society whose mission is to gather, process and disseminate technical information. ASM fosters the understanding and application of engineered materials and their research, design, reliable manufacture, use and economic and social benefits. This is accomplished via a unique global information-sharing network of interaction among members in forums and meetings, education programs, and through publications and electronic media.

### **TMS MISSION**

The mission of TMS is to promote the global science and engineering professions concerned with minerals, metals and materials.

In support of this mission we will

- ◆ Provide forums and other opportunities for: 1) The exchange of information among all segments of our community; and 2) Networking and making contacts vital to members' interests
- ◆ Provide state-of-the-art means for disseminating information pertinent to the community
- ◆ Promote technology transfer and, thereby, the economic health of our industries
- ◆ Provide means for the professional development and career maintenance of members
- ◆ Assume a leadership role in the minerals, metals and materials community by promoting collaboration and alliances among minerals, metals and materials societies and organizations in order to strengthen the technological basis of the profession and our members
- ◆ Participate in the development of students for entry into the minerals, metals and materials professions
- ◆ Represent the minerals, metals and materials professions in the accreditation of education programs and in the registration of professional engineers
- ◆ Encourage professionalism, ethical behavior, and concern for the environment

## MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

### STUDENT MEMBER & CHAPTER BENEFITS

#### FINANCIAL OPPORTUNITIES:

- ◆ Nearly \$600,000.00 in individual scholarships available through societies, chapters and Foundations
- ◆ Student chapter travel grants/scholarships
- ◆ Membership rebates to student chapters
- ◆ Free or highly reduced conference registration fees
- ◆ Paid room monitor/paging positions at society meetings to help defray the costs of attending

#### CAREER RESOURCES:

- ◆ Career information services including Career Resource Center
- ◆ Résumé Link—a résumé referral system, free of charge
- ◆ Position-wanted ads, placements online and in magazines
- ◆ Available internships, co-ops and graduate research positions through the online bulletin board

#### DEVELOPMENT OPPORTUNITIES:

- ◆ Annual Chapter Leadership Workshop at MS&T
- ◆ Eligibility for student competitions such as Student Paper Contests, Design Contests and Chapter Competitions
- ◆ Student chapter programs and outreach activities
- ◆ Professional development opportunities
- ◆ Networking opportunities - meet future employers and colleagues through regional and national conferences and events
- ◆ Access to professional chapters/sections in local area
- ◆ Access to/add-on memberships of affiliate societies/technical organizations
- ◆ Chapter articles published in partner journals

#### INFORMATION RESOURCES:

- ◆ Rotating subscriptions to *The American Ceramic Society Bulletin*, *Iron & Steel Technology*, *Advanced Materials & Processes*<sup>®</sup> magazine (including ASM News) and *JOM*
- ◆ Monthly electronic access to all four society publications
- ◆ Free online access to the *Journal of the American Ceramic Society* and the *International Journal of Applied Ceramic Technology*
- ◆ Material Advantage e-Newsletter
- ◆ Savings on ACerS, AIST, ASM and TMS technical books and journals
- ◆ Custom searches through the ASM Library
- ◆ Access to ACerS *ceramicSOURCE* online and ASM Handbooks – Desk Edition online
- ◆ Access to online member directories
- ◆ Access to AIST 's SteelLibrary, ASM materials library and TMS Document Ordering Center
- ◆ Unlimited, free use of Linda Hall Library, the largest technical library in the world
- ◆ Free downloads of technical papers from ACerS, AIST, and TMS

#### FUTURE OPPORTUNITIES:

- ◆ Upon graduation, one year free membership in ACerS, AIST, ASM and TMS
- ◆ Choice of a free ASM reference book
- ◆ Choice of free TMS or other AIME member society book upon graduation, with advancement to the grade of professional member

## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **HOW TO APPLY FOR MATERIAL ADVANTAGE STUDENT MEMBERSHIP Qualifications:**

Any post secondary student currently enrolled full-time in a post-secondary institution, and majoring in the field of materials science and engineering, or a related engineering discipline, is eligible for Material Advantage Student Membership upon application and payment of dues.

**Membership Year:** The Material Advantage Student Membership year runs January 1 through December 31. New member dues are based on the following schedule:

- ◆ Applications submitted January 1<sup>st</sup> – July 31<sup>st</sup>, \$30.00 for the current calendar year
- ◆ Applications submitted in August 1<sup>st</sup> – December 31<sup>st</sup>, \$30.00 for the remainder of the current calendar year and the entire following year; subscriptions to commence at the beginning of the following year. In succeeding years, all student members will be billed membership dues in October for the following year. (Note: One week required for processing of complete applications submitted with payment. Allow 6-8 weeks for subscriptions to start.)

**Membership Renewal:** In September/October, current student members will be sent a renewal invoice to update their membership for another year. The renewal will be effective from January—December of the following year. If a student has graduated during the current year, applications to take advantage of one free year of professional membership in ACerS, AIST, ASM, and/or TMS will be sent by the individual partner instead of the renewal invoice.

**Applications:** Material Advantage membership applications are available on the Material Advantage website: [www.materialadvantage.org](http://www.materialadvantage.org)



## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **STUDENT MEMBERSHIP RECRUITMENT**

The recruitment of new members for the chapter is the responsibility of every chapter member. Some colleges and universities have well-organized events that give student organizations the opportunity to talk to new students or to publicize their activities. In other schools, it is up to the creative planning of the chapter to seek out and recruit new members.

Before creating a recruitment plan for the academic year, make sure that all members of the chapter are familiar with the many benefits of membership in Material Advantage. It will also be important to look at your own chapter and the department at your institution to identify the unique benefits of association with your group. Work with your department to identify students and different fields of study that may be interested in materials science and engineering directly or indirectly.

All chapters should plan creative, interesting activities during the Membership Challenge Program in October and March. Members who attend the fall conference/meeting activities will have opportunities to talk to other chapter leaders for innovative ideas and recruitment methods that have been successful.

#### **Recruitment Ideas:**

##### **Member-Get-A-Member**

Take advantage of the membership programs and incentives offered by the societies, or develop your own to encourage members to identify and recruit individuals who would benefit from association with the societies and the chapter.

##### **Orientation**

Contact your college or university orientation office to see if there are any opportunities to talk to incoming first year students. Chapter activities as well as society journals are important ways to learn about a field of study and/or possible careers.

##### **Student Unions**

Are there areas where the chapter can post information about upcoming events and activities? The Student Union or gathering place at your college or university may have areas to leave a supply of applications or posters about chapter activities. This is also a good location for fund-raising activities that make students aware of your group.

##### **Campus-wide Activities**

Get involved! Sometimes the best way to recruit new members for your chapter is to be involved on your campus or in your department. If you get involved with campus activities as a group, other students will become familiar with your name and your mission.

##### **Technical Programs**

Work with your local ACerS Professional Section, AIST Member Chapter, ASM Professional Chapter and/or TMS Local Section to plan technical programs that might spark interest in other students, faculty, and local professionals. This is a great way to demonstrate how association with a professional society can give one access to the most current information in the field.

##### **Career Workshops**

Ask members of the faculty as well as your local ACerS Professional Section, AIST Member Chapter, ASM Professional Chapter and/or TMS Local Section to speak to your chapter about the job market and career opportunities. Many professionals would be delighted to share personal experiences, and this is a good opportunity to highlight the strong networking and support available through professional associations.

## Technology

If you have access to e-mail and/or the Internet, use the technology! Many chapters have developed websites, and this is a wonderful way to show off the chapter's accomplishments and members. Use e-mail to target students on your campus and to share the benefits of membership.

### **More Recruitment Ideas:**

There are a lot of ways to recruit more student members for your chapter. One of the most effective recruiting techniques is to be sincere and explain why you are a Material Advantage student member. Whether you enjoy the chapter meetings and activities, discounts on books and conferences, the member journals, or the free resume listing service, let potential members know what student membership can do for them!

### **Personal Contact**

- ◆ Look for other students in your classes who are not members of Material Advantage. Explain the benefits of student membership and what it can do for them.
- ◆ Establish a program for upperclassmen to recruit freshmen and sophomores.
- ◆ A personal phone call is a great way to contact students!
- ◆ Arrange to make a brief appearance at a seminar class for engineers.
- ◆ Get your local ACerS, AIST, ASM and TMS professional members involved with contacting students exploring MSE.
- ◆ Work with your department to help recruit to the department as well as to the chapter.

### **Mail**

- ◆ Obtain a list of students in similar engineering majors from your faculty advisor or registrar's office. Determine which students are not members and send them a personal e-mail inviting them to the next chapter meeting.
- ◆ Send a personal e-mail message to all students in the College of Engineering.

### **Speaker Series**

- ◆ Bring in a speaker to present an interesting topic. Have membership applications on hand for potential members. The speaker could be a faculty member, a grad student with an interesting research project or a professional in the area.
- ◆ Arrange for a local professional chapter to speak on the engineering job market and how to obtain an entry-level position.
- ◆ Find topics of interest for both graduate and undergraduate students!

### **Chapter Events**

- ◆ Schedule a field trip or plant visit with a local company. This will often bring in large numbers of members who may or may not be current members.
- ◆ Have a social function at the beginning of each semester. Present the benefits of student membership to potential members.
- ◆ As a chapter, think about the unique, specific benefits of membership in your particular chapter.
- ◆ Ask each chapter member to bring one friend, who is not a member, to an event.
- ◆ Look at ways to partner with other technical/engineering societies on your campus for joint events. Let both societies talk about opportunities in their organization.
- ◆ Find activities that make your chapter visible on your campus—campus wide events, community service, MSE t-shirts.

*We'd love for you to share your recruitment ideas with other chapters!  
Please send your chapter's best practices to [students@asminternational.org](mailto:students@asminternational.org)*

## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **STUDENT CHAPTER ELIGIBILITY REQUIREMENTS**

Material Advantage student chapters are formed at colleges and universities upon petition and approval of a student chapter charter initiated by student members or faculty. All students and faculty at colleges and universities are eligible to petition for establishment of a Material Advantage student chapter. The Board of Directors of ACerS, the Board of Directors of AIST, the Board of Trustees of ASM International and the Board of Directors of TMS review petitions at their annual meetings and/or other scheduled meetings. Notification of approval is forwarded to the chapter upon the Boards decision.

**NOTE:** Provisional approval may be extended to chapters before their petitions are formally reviewed by the Boards.

### **STUDENT CHAPTER STATUS AND EXPECTATIONS**

The Material Advantage student chapter status will be assessed each summer after receipt of the Annual Report and officer list, and prior to the start of the next academic year.

#### **Active Status**

An active student chapter meets the following five criteria:

- ◆ Holds a Student Chapter Charter;
- ◆ Has a Faculty Advisor who holds a current membership in ACerS, AIST, ASM and TMS;
- ◆ Has Chapter Officers elected annually;
- ◆ Submits an Annual Report to the Material Advantage Student Chapter Program **no later than June 1** of the current year; and
- ◆ Has a minimum of 10 student members in the chapter as of the Annual Report OR has submitted acknowledgment that the chapter is otherwise active.

#### **Inactive Status**

A chapter meeting the criteria listed below will be considered inactive until further notice. These chapters are **not** eligible for student chapter rebates, travel grants, or participation in chapter contests. Students at these schools will be assigned a “no chapter” code for membership, and may request to become active in the local ACerS professional section, AIST member chapters, ASM professional chapter and/or the TMS local section. Inactive chapters do not receive regular chapter mailings. An inactive chapter:

- ◆ Has not submit an annual report within one year of the last deadline.
- ◆ Does not expect to become active in the near future.

If an inactive chapter wishes to become active, the faculty advisor or department chair must submit a written request to the Material Advantage Chapter Program to reactivate the chapter charter. A copy of the chapter Bylaws, a minimum of 15 student member signatures, and the chapter officer listing must also be attached to the request.

**NOTE:** Only Chapters with an “Active” status are eligible for Student Chapter Travel Reimbursement funds.

## STUDENT CHAPTER BENEFITS AND OPPORTUNITIES

Material Advantage student chapter benefits and services for active chapters include but are not limited to the following:

- ◆ Participation in the Chapters of Excellence and Membership Challenge Programs
- ◆ Regular Material Advantage mailings to update faculty and students of individual, Material Advantage, and cooperative organization activities; including upcoming conferences, workshops, publications and student contests
- ◆ Assistance from ACerS, AIST, ASM and TMS staff in generating chapter activity and participation
- ◆ Active Material Advantage student chapters will receive financial support through rebates based upon the number of affiliated student members

Current Material Advantage student chapter benefits and opportunities offered by ACerS, AIST, ASM and TMS include:

- ◆ A chapter rebate—\$5 per active student members who have RENEWED their membership by December 31st—is sent to qualifying active chapters annually (January).
- ◆ \$500 travel allowances from AIST to send student members to attend AIST conferences and meetings.
- ◆ Up to \$500 travel allowances from TMS to send student members to attend TMS meetings.
- ◆ The Chapters of Excellence Contest recognizes chapters who excel in all areas of chapter management and operation.
- ◆ Membership Challenge Program incentives, which include chapter recognition and cash awards.
- ◆ Faculty Advisors receive a *free year of membership* from ACerS, AIST, ASM and TMS if the chapter submits the Annual Report by the June 1 deadline.

For detailed information on student chapters, please refer to the website: [www.materialadvantage.org](http://www.materialadvantage.org)

**MATERIAL ADVANTAGE**  
**ACerS, AIST, ASM International and TMS Student Program**

**HOW TO START A NEW STUDENT CHAPTER**

All students and faculty at colleges and universities are eligible to petition for establishment of a Material Advantage student chapter. If a group of student members wishes to form a Material Advantage student chapter at a college or university, they should take the following steps:

1. Seek the support of a Faculty Member who is an ACerS, AIST, ASM and/or TMS member and who will agree to act as the student chapter Faculty Advisor.
2. Meet to discuss the reasons to form a student chapter.
3. Elect a charter executive committee consisting of a:
  - ◆ Chapter Chair
  - ◆ Chapter Vice-Chair
  - ◆ Chapter Treasurer
  - ◆ Chapter Secretary
4. Create the chapter bylaws using the recommended format outlined in the Material Advantage Student Chapter Handbook.
5. Complete and submit the following documents, which are available on the website, to the Material Advantage Student Chapter Program:
  - ◆ Material Advantage Chapter Charter Application
  - ◆ New Material Advantage Chapter Petition Form (With a minimum of 15 student member signatures)
  - ◆ Chapter Bylaws
  - ◆ Chapter Officer Listing

The submitted materials will be forwarded to the ACerS, AIST, ASM and TMS Boards for approval at their next Board Meetings. Upon approval by all Boards, the Material Advantage Student Chapter Charter will be issued, and a start-up allowance check in the amount of \$150 will be forwarded to the Faculty Advisor on behalf of the chapter. A new Material Advantage Student Chapter will also receive a Material Advantage charter for display.

**NOTE:** Provisional approval may be extended to chapters before their petitions are formally reviewed by the Boards.

**For detailed information on how to start a new student chapter, please refer to the  
website: [www.materialadvantage.org](http://www.materialadvantage.org)**

## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **HOW TO BECOME A MATERIAL ADVANTAGE CHAPTER**

If your chapter is currently an ACerS-Only, AIST-Only, ASM- Only or Joint ASM/TMS chapter, you must meet the following criteria and take the following steps to be considered for a Material Advantage Student Chapter Charter:

1. Chapter must be at a college or university.
2. Student chapter must be considered active. (See “Material Advantage Chapter Expectations”)
3. Create chapter bylaws using the recommended format outlined in the Student Chapter Handbook.
4. Complete and submit the following documents, which are available on the website, to the Material Advantage Student Chapter Program Office:
  - ◆ Individual/Joint Student Chapter -to-Material Advantage Chapter Petition Form
  - ◆ Material Advantage Chapter Bylaws

The submitted materials will be forwarded to the ACerS, AIST, ASM and TMS Boards for approval at their next Board Meetings. Upon approval of all Boards, a new Material Advantage Student Chapter Charter will be forwarded to the Faculty Advisor.

**For detailed information on how to convert to a Material Advantage student chapter, please refer to the website:**

**[www.materialadvantage.org](http://www.materialadvantage.org)**

# MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

## Material Advantage Student Chapter Sample Bylaws

A sample format for Chapter Bylaws follows. Before a Student Chapter Charter is granted, a chapter must submit a set of Bylaws that will govern the Chapter. The Student Chapter should write the Bylaws to meet the needs of its particular membership and chapter structure. Each year the Bylaws should be reviewed, and revised if necessary. If revisions are necessary, the approved Bylaws must be sent to the Material Advantage Student Chapter Program to be included in the permanent chapter files.

### Section I: Name

- Article 1. The name of this student chapter shall be " \_\_\_\_\_ " Material Advantage Student Chapter of the American Ceramic Society, the Association for Iron and Steel Technology, ASM International and The Minerals, Metals & Materials Society.
- Article 2. This Chapter shall be chartered by the Board of Directors of the American Ceramic Society (herein after ACerS), the Board of Directors of the Association of Iron and Steel Technology (herein after called AIST), the Board of Trustees of ASM International (herein after called ASM) and the Board of Directors of The Minerals, Metals & Materials Society (herein after called TMS).
- Article 3. This Chapter shall be governed at all times by the provisions of The Constitution of ACerS, the Bylaws of AIST, the Constitution and the Rules for the Government of ASM and the Bylaws of TMS.

### Section II: Purpose

- Article 1. The purpose of this Chapter shall be to promote among its members a self-sought increasing knowledge of metallurgy, ceramics, materials science and engineering and all its branches and to instill a professional pride in their chosen life work.

### Section III: Membership

- Article 1. Any post secondary student currently enrolled full-time in a post secondary institution shall be eligible for student membership.
- Article 2. A student member shall remain eligible for this class of membership until his/her principal occupation ceases to be that of a student or he/she no longer pays annual dues.
- Article 3. A student member enrolled at this institution shall be assigned to this student chapter unless he/she requests a different chapter or this chapter becomes inactive.

### Section IV: Dues

- Article 1. The fee for Material Advantage student membership is set by the ACerS Board of Directors, the AIST Board of Directors, the ASM Board of Trustees and the TMS Board of Directors. The current Material Advantage student membership fee can be determined by obtaining a current Material Advantage student membership application.
- Article 2. The annual fee shall accompany any application for Material Advantage student membership.
- Article 3. The Material Advantage student membership year runs on the calendar year from January 1 to December 31.

### Section V: Officers

- Article 1. The officers of this student chapter shall consist of a Chair, Vice Chair, Secretary and a Treasurer.
- Article 2. This Student Chapter shall elect, by majority vote of the chapter members present, a Chair, Vice Chair, Secretary, and Treasurer in the spring of each year to serve during the following academic year.
- Article 3. To be eligible for election, the nominee must be a Material Advantage student member or must have applied for such membership and must have been a member of a Student Chapter during the previous school term.
- Article 4. If the office of Chair becomes vacant for any reason during the elected term, the Vice Chair shall become Chair for the remainder of the term, thereby creating a vacancy as Vice Chair. Vacancies in any elected office other than that of Chair shall be filled by a simple majority vote at a regularly scheduled chapter meeting.
- Article 5. At the annual election, there shall be chosen, from the faculty, a member of ACerS, AIST, ASM and/or TMS who shall act as Faculty Advisor to advise and counsel the officers.

## **Section VI: Duties of the Officers**

- Article 1. The Chair of this Student Chapter shall preside at all meetings.
- Article 2. The Chair shall assume all executive duties not otherwise delegated to others by these bylaws.
- Article 3. The Vice Chair shall preside at chapter meetings or events in the absence of the Chair.
- Article 4. The Secretary shall keep records of each meeting for the permanent chapter records. The Secretary shall also be responsible for submitting brief reports of all activities for publication by ACerS, AIST, ASM and TMS.
- Article 5. The Secretary shall forward an Annual Report, prepared by the Executive Committee, to ASM Headquarters before June 1 of each year, summarizing the activities of the Chapter during the preceding year and listing the newly elected officers for the following year.
- Article 6. The Treasurer shall submit a Financial Report to the Chapter Executive Committee giving a complete accounting of the Chapter's finances. This report shall be appended to the Annual Report.
- Article 7. All Chapter documents, financial reports and funds shall be left with the Faculty Advisor for any vacation period when the college or university is not in session.

## **Section VII: Committees**

- Article 1. The officers of the Chapter, including the Faculty Advisor, shall constitute an Executive Committee charged with the responsibility of the Chapter management, programming, reporting, and activities.
- Article 2. The standing committees shall include but are not limited to the following:
- a) Programming Committee - Plans, organizes and executes the chapter technical, educational, and joint professional activities.
  - b) Membership/Outreach Committee - Organizes and implements programs which promote student membership as a way to explore metallurgy, ceramics, materials science and engineering as a field of study and career path.

## **Section VIII: Meetings**

- Article 1. Regular Student Chapter meetings, held at such times and places as the Executive Committee and Faculty Advisor shall determine, shall be devoted to educational, technical, engineering, or scientific purposes. The Chair or Faculty Advisor may call a special meeting at any time.

## **Section IX: Amendments**

- Article 1. This Student Chapter may amend its Bylaws in any fashion consistent with the Constitution of ACerS, the Bylaws of AIST, the Constitution and Rules for the Government of ASM and the Bylaws of TMS. Such amendments, after adoption by two-thirds vote of the Chapter membership, shall be filed with the Material Advantage Chapter Program.

## **Section X: Professional Chapter Affiliation**

- Article 1. This Student Chapter will be affiliated with the local ACerS Section, AIST Member Chapter, ASM Professional Chapter and TMS Section assigned by the respective societies. The assigned affiliation may be changed by proposal of either the Student Chapter or the regular Chapter and is subject to approval by each.

## **Section XI: Dissolution of Chapter**

- Article 1. If for any reason this Material Advantage Student Chapter is dissolved, the Charter should be returned to the Material Advantage Chapter Program. All funds or other property remaining after payment of debts and obligations of this Student Chapter shall be transferred and divided between the four societies.



# MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

## SUGGESTED PROGRAM CALENDAR

This sample operations calendar should be used as a guide in planning for an effective chapter year.

Modification of the calendar to align with individual academic calendars is encouraged.

### August

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r2J Fall email to all faculty advisors and chapter chairs

### September

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r2J Fall Membership Challenge Announced

- ◆ Annual “Kick-Off” Event
- ◆ Executive Committee meeting
- ◆ First monthly chapter meeting
- ◆ Students sign-up for student monitor/paging positions at fall meetings
- ◆ Plan to attend MS&T
- ◆ Plan to attend ASM Annual Meeting at MS&T
- ◆ Plan to attend ACerS Annual Meeting at MS&T
- ◆ Plan to attend student activities at MS&T

### October

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- ◆ Fall Membership Challenge Program
- ◆ Attend MS&T
- ◆ Executive Committee meeting

### November

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- ◆ Field trip/Plant tour
- ◆ Executive Committee meeting
- ◆ Monthly chapter meeting

### December

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- ◆ Chapter annual social event
- ◆ Registration deadline for TMS Technical Division Poster Contest
- ◆ Apply for AIST Foundation, FeMET and StEEL Scholarships (deadline March 1)

### January

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- ◆ Executive Committee Meeting
- ◆ Monthly chapter meeting
- ◆ Attend ACerS Electronic Materials and Applications Meeting
- ◆ Attend ACerS Advanced Ceramics & Composites Meeting
- ◆ Apply for TMS Scholarships (deadline March 15)

### February

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- ◆ Spring Membership Challenge Announced
- ◆ Executive Committee meeting
- ◆ Monthly chapter meeting
- ◆ Review bylaws
- ◆ Attend TMS Annual Meeting

### March

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- ◆ Spring Membership Challenge Program

- ◆ Executive Committee meeting
- ◆ Monthly chapter meeting
- ◆ AIST Foundation, FeMET, and STEEL Scholarship Applications (due March 1)
- ◆ Register for AIST Student Presentation Contest
- ◆ TMS Scholarship Applications (due March 15)
- ◆ Nominations for election of officers

### April

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- r2J Spring email Annual Report Announcement to Faculty Advisors and chapter chairs
- ◆ Executive Committee meeting
  - ◆ Annual business meeting
  - ◆ Election of officers
  - ◆ Reminder to chapter members re: Scholarship & Paper Contest entries
  - ◆ Sign up for Session Monitor positions at AISTech (due April 15)

### May

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- Q, ASM Undergraduate Scholarship Applications due May 1
- Q, TMS Best Paper Contest entries due May 1
- ◆ Material Advantage Executive Committee annual award meeting
  - ◆ Recognition of member contributions/achievements
  - ◆ Recognition of outgoing chapter officers
  - ◆ Establishment of goals for coming chapter year
  - ◆ Preparation of preliminary agenda for coming year meetings/activities
  - ◆ Attend AISTech
  - ◆ Attend ACerS Glass & Optical Materials Meeting

### June

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- Q, Annual Report (due June 1)
- Q, Chapters of Excellence nominations (due June 1)

### July

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- ◆ Finalize coming year’s program
- ◆ Make final room and speaker arrangements for September’s regular chapter meeting
- ◆ Plan and make all arrangements (event place, food, etc.) for September “Kick-Off” event
- ◆ Plan chapter display for MS&T in September
- ◆ World Materials Day Contest Deadline (due July 30)
- ◆ Plan upcoming year’s recruitment effort

## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **CHAPTER STRUCTURE**

There are many options for the structure of your student chapter. Many of the most successful chapters have an umbrella organization that encompasses several different societies. Some chapters include all students in their department as members. Still others include only a select group of students who wish to be involved in the management of the chapter. Please work with your executive committee and faculty advisor to discuss the structure that works best for your chapter. The Material Advantage partnering societies want you to work with the structure that best suits your student members and your department. Below are some ideas:

#### **Materials “Club”**

This is often an umbrella organization that includes the Material Advantage chapter as well as other materials -related societies. By sharing journals and highlighting activities, scholarships, and conferences of all of the societies, students benefit by learning about more career options and meeting more people. Some Materials Clubs have one executive board with representatives from each society, and others actually have separate executive boards but combine their activities. The biggest challenge to having a materials club organization is to make sure that you meet the requirements for each organization that you represent.

#### **Department Chapters**

Some departments strongly encourage or require their students to be members of the societies. This is an easy way to recruit; however, it is probably more important than ever in this situation to make sure that students realize the benefits of membership so that they will be involved. The advantage of department-wide chapters is that there is a strong possibility that several faculty members are involved, and the department is probably involved in supporting seminars, regular meetings and chapter activities.

#### **General Assembly Chapters**

You may find it useful to hold regular meetings and encourage anyone who is interested to come. It is important to have well-run and effective meetings so that students don't feel that they are a waste of time. Effective programming can encourage more students to get involved - increasing membership and interest. Some chapters hold a weekly luncheon meeting with a variety of topics throughout the year; others hold separate meetings for undergraduate and graduate students, and set up appropriate topics for each group.

## **MATERIAL ADVANTAGE**

ACerS, AIST, ASM International and TMS Student Program

### **RELATIONSHIPS**

#### **Contact with Partnering Society Headquarters**

There are many services and benefits available to student chapters and student members that are provided through the partnering society headquarters. Two-way communication between the chapter and headquarters is essential. The Material Advantage Student Program staff will maintain communication with the Faculty Advisor, while the Student Affairs/Outreach committees of each partnering society may also contact the chapter to facilitate communication.

##### *Responsibilities of Student Chapter*

- ◆ Submit the required chapter annual report each spring; update information regularly
- ◆ Submit pictures and stories to be included in society publications and electronic newsletter
- ◆ Encourage members to attend society meetings and conferences
- ◆ Notify headquarters of any concerns or needs

#### **Involvement with an ACerS, AIST, ASM or TMS Professional Chapter/Section**

Where possible, the students should have both access to and involvement with practicing ceramics, metallurgy and materials professionals through the affiliate ACerS, AIST, ASM or TMS professional chapter/section. These professionals and their chapter provide the student chapter with examples of professional commitment and effective chapter management. This interaction also provides important opportunities to learn about potential careers in materials related fields.

##### *Responsibilities of Student Chapter*

- ◆ Involve local professional members in student chapter meetings and activities; keep the members of the local professional chapter informed of plans and activities
- ◆ Attend regular chapter meetings whenever possible
- ◆ Contact the local chapter or section when a member or staff visit is scheduled

#### **Department/University Support**

The Department and the University are both important in the success of the student chapter. Recruitment activities for the chapter, as well as promotional opportunities, can be conducted through the department. Interaction with faculty beyond the Faculty Advisor is also recommended for additional departmental support and contacts for the student members.

##### *Responsibilities of Student Chapter*

- ◆ Communicate with Department regarding society activities, scholarships, and support
- ◆ Advise Department of the student chapter's plans and activities
- ◆ Involve faculty in chapter activities whenever possible

#### **The Faculty Advisor**

The Faculty Advisor plays a key role in ensuring the chapter's success. The chapter officers and members must work closely with the Faculty Advisor to plan its activities. The Faculty Advisor will be the primary link to the department as well as to the society headquarters.

##### *Responsibilities of the Student Chapter*

- ◆ Regular communication with partnering society headquarters to receive updated materials and information
- ◆ Invite the Faculty Advisor to all Executive Committee and chapter meetings
- ◆ Continuously recognize the Faculty Advisor for volunteering his/her time and energy toward the success of the chapter

# MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

## CHAPTER LEADERSHIP ROLES

### **The Faculty Advisor**

The guidance that the Faculty Advisor provides is the primary element in the establishment and continuity of the student group. The advisor understands the materials/metallurgy fields in a societal context, and recognizes the benefits of membership in a professional society. A general interest in and enthusiasm for the student's efforts, activities and attendance at planned events are important contributions that the Faculty Advisor makes throughout the chapter year. More than one faculty member may act as Faculty Advisor; however, one person should be identified as the primary contact. Please note that only the one faculty member who is identified as the primary contact will receive free membership in the four Partner Societies (see page 9).

#### *Responsibilities of the Faculty Advisor*

- ◆ Promote and encourage the Material Advantage Program and participation on campus
- ◆ Encourage attendance at Material Advantage Partnering Society events and meeting
- ◆ Primary contact for society headquarters
- ◆ Receives Chapter Materials for distribution to officers
- ◆ Receives Chapter Rebate to distribute to Treasurer
- ◆ Advises Chapter Officers and Committee Chairs on the formation and implementation of its goals, objectives, and programs
- ◆ Ensure that the chapter understands the roles of ACerS, AIST, ASM and TMS as professional organizations.

### **Executive Officers**

The quality of leadership provided by the officers of the student chapter significantly influences the level of involvement and participation of both chapter members and other interested individuals in planned chapter activities. It is imperative that the officers understand the importance of their roles in setting the direction of the chapter. The officer's commitment to the chapter will be reflected in the overall success and continuity of the group. The officers of a student chapter usually consist of a Chair, Vice -Chair, Secretary and Treasurer. The last two positions may be combined (e.g., a Secretary/Treasurer) in a small chapter. Student officers should be elected prior to the submission of the chapter annual report.

#### *Responsibilities of the Student Chapter Executive Officers*

- ◆ Be fully conversant with the Rules of Government for student chapters and the chapter bylaws
- ◆ Act as the primary interface between the student chapter, the Faculty Advisor, the Department and University within which it functions, and Material Advantage partnering society liaisons
- ◆ Establish a clear set of objectives and an operating plan for the chapter year
- ◆ Take responsibility for fulfillment of the chapter's established objectives
- ◆ Train newly elected officers and hand over materials each spring

### **Chapter Chair**

The Chair serves as the principle point of contact between the chapter and the public, the chapter and its individual members, and the chapter and the partnering societies. The Chair is the chief officer and leader of the chapter. The Chair is responsible for working with the Faculty Advisor and executive committee to guide the chapter and develop the organization into an effective group to meet the needs of the school, members, and the partnering societies. The ability to work with and guide fellow officers, committee chairs and committee members are the primary qualities that will ensure success as a Chapter Chair.

## **LEADERSHIP ROLES, *Continued***

### ***Responsibilities of the Chapter Chair***

- ◆ Works closely with the Faculty Advisor and ensures communication with him/her
- ◆ Presides at all meetings of the Chapter and its Executive Committee
- ◆ Is familiar with accepted parliamentary procedures
- ◆ Delegates committee responsibilities and makes committee appointments as outlined in the chapter's bylaws
- ◆ Coordinates communication with society headquarters
- ◆ Coordinates and assures chapter reporting and record keeping functions
- ◆ Appoints a nominating committee to select a slate of candidates for the following year prior to elections

### **Vice Chair**

The Vice Chair supports the Chair and aids whenever and wherever he/she can be of assistance to the Chair. The Vice Chair also directs the Program Committee, thus managing the technical and educational activities of the chapter. The Vice Chair must be a good communicator and should be capable of leading the chapter in the absence of the Chair.

### ***Responsibilities of the Vice Chair***

- ◆ Directs the major chapter activity of the year
- ◆ Serves as Chair of the Program Committee
- ◆ Serves as an ex-officio member of all major committees
- ◆ Leads the chapter in the absence of the Chair

### **Secretary**

The role of the Chapter Secretary has profound effect on the success of the Chapter. The Secretary may require assistance in the form of a support committee. The Secretary is responsible for all record-keeping for the chapter; documenting all decisions made at meetings as well as attendance of members and non-members for each chapter event.

### ***Responsibilities of the Secretary***

- ◆ Maintains all chapter records
- ◆ Keeps minutes for all Chapter Executive committee meetings
- ◆ Acts as an official correspondent for the chapter
- ◆ Fulfills all reporting requirements including monthly meeting and annual reports
- ◆ Submits information to society headquarters to highlight chapter activities

### **Treasurer**

The Chapter Treasurer has the responsibility for gathering, distributing and managing the Chapter's funds. Sound chapter operations require the establishment of and adherence to realistic budgets. Each committee should be informed of funds budgeted for its activities prior to planning for the year.

### ***Responsibilities of the Treasurer***

- ◆ Receives and deposits all funds paid into the Chapter
- ◆ Disburses funds as authorized by the Executive Committee
- ◆ Prepares financial reports for chapter meetings
- ◆ Submits financial information for annual report

## **MATERIAL ADVANTAGE**

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### **CHAPTER COMMITTEES**

The strongest student chapters are those that operate in a highly efficient manner with the involvement of all members. Focused committees are an effective way to get members involved in the areas in which they have the strongest interest. How many and what types of committees are needed varies with the size and location of the chapter. The minimum committees recommended to carry on the chapter functions are: Executive, Programming, and Recruitment/Outreach.

#### **The Executive Committee**

The Executive Committee sets chapter policy and guides the many activities of the student chapter. It works closely in partnership and cooperation with partnering society headquarters, its officers and Trustees.

##### **Committee Structure**

- ◆ Chair: Chapter Chair
- ◆ Faculty Advisor(s)
- ◆ Vice Chair
- ◆ Secretary and Treasurer
- ◆ The Chairs of the chapter committees
- ◆ It may also include up to three (3) past Chairs of the chapter and additional appointees who represent the interest of the chapter membership

##### **Responsibilities of the Executive Committee**

- ◆ Sets goals for the chapter based upon the needs of the chapter members
- ◆ Plans the business meetings of the chapter
- ◆ Regularly reviews the plans and accomplishments of all working committees
- ◆ Monitors the financial results of the various chapter activities
- ◆ Appoints, redistributes and fixes the duties of non-elected officers of committees as deemed necessary

#### **The Program Committee**

Plans, organizes and executes the chapter technical, educational, and joint professional activities and programs.

##### **Committee Structure**

- ◆ Chair: Vice Chair of the chapter or Program Committee Chair appointed by the Chapter Chair
- ◆ Chapter members interested in planning, organizing and executing the chapter's technical, social and professional activities

##### **Responsibilities of the Program Committee**

- ◆ Communicate regularly with local professional chapter or section
- ◆ Decide on the subjects and dates for chapter programs by soliciting suggestions from the Faculty Advisor as well as the chapter membership
- ◆ Draws up a list of preferred and alternate speakers for respective subjects
- ◆ Plans or arranges publicity for any activities
- ◆ Makes arrangements for location and necessary equipment for any chapter activities
- ◆ Acts as the hosts for any invited speakers
- ◆ Selects technical Chair for each meeting (often this task is assumed by the individual member of the committee responsible for securing the speaker for the evening)

## **Committees (Cont.)**

### **The Membership/Outreach Committee**

The Membership/Outreach Committee organizes and implements programs that promote student membership as a way to explore metallurgy/materials science and engineering as a field of study and career path.

#### **Committee Structure**

- ◆ Chair: Membership Committee Chair appointed by the Chapter Chair
- ◆ Chapter members interested in recruiting new members to the student chapter and promoting materials science and engineering and related areas as a field of study

#### **Responsibilities of the Membership/Outreach Committee**

- ◆ Attracting new members
- ◆ Retaining existing members
- ◆ Promoting materials science and engineering programs and opportunities through membership
- ◆ Supporting Department/University, or affiliate ACerS, AIST, ASM or TMS professional chapters/sections outreach efforts to younger students
- ◆ Plan and conduct at least one membership drive each year
- ◆ Actively solicit new student members
- ◆ Invite, greet and welcome new and potential members to meetings
- ◆ Maintenance of a supply of membership literature and current application blanks
- ◆ Conduct a membership display at special events
- ◆ Promotion of society-wide membership activities
- ◆ Developing outreach activities to support departmental recruitment into the field

## **MATERIAL ADVANTAGE**

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### **CHAPTER MANAGEMENT**

Any meeting planned by the chapter should be well-planned and have a clear purpose. Setting an agenda, and communicating it to the participants will help in the organization of a meeting. Following are some simple steps to running an efficient meeting:

#### **Meeting Arrangements**

Responsibility for a successful meeting can be traced to effectiveness of the meeting arrangements. Although the scope of the meetings will vary from chapter to chapter, the planning normally includes the physical arrangements as well as the agenda for chapter meetings and functions.

The committee planning the meeting or event should begin its activities well before the first meeting of the chapter year. Action is required as soon as the program committee has determined the complete program and, if applicable, as soon as the executive committee has determined the meeting dates and sites.

Meeting sites should be selected to augment the program and with consideration for the convenience of the members. Confirmation for meeting place and date should be made as early as possible and in writing.

#### **Meeting Agendas**

Using an Agenda or “Order of Business” will help your meetings run more smoothly. Your members will know what to expect and you will cover all items that need to be addressed. Make sure that everyone attending a meeting understands what is to be accomplished at that meeting. You may want to attach a time limit to each area in order to keep the meeting moving through the agenda.

#### **Suggested Order Of Business**

- I. Call to Order
- II. Roll Call
- III. Minutes From Last Meeting
- IV. Officers’ Reports
- V. Committee Reports
- VI. Special Business
- VII. Old Business
- VIII. New Business
- IX. Announcements
- X. Adjournment



## MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

### PROGRAMMING

Development and execution of a program of balanced meetings and events is critical to the vitality of the chapter. Establishment of chapter programs, which include a mixture of technically, and socially enhancing activities—appealing to both the student chapter members and those in their immediate community—will ensure broad participation.

Each year's programs should be laid out in advance of the beginning of the chapter year by the Executive Committee and should include: Chapter meetings, technical talks and presentations, field trips and plant tours, outreach activities, recruitment activities, and social events.

#### **Planning**

The Program Committee should start formulating its program early, and it is not amiss to start work before the close of the current year. Some program committees are charged with planning programs a full year ahead.

Meeting dates should be fixed early and announced to the membership. Dates should be selected to avoid conflict with religious and legal holidays, mid-terms, exams, University programs, meeting dates of neighboring chapters or other technical societies. Also, it is important to try to space the meeting dates equally. Many chapters maintain a regular meeting night from year to year. (For example, the second Tuesday of every month.)

Successful technical programming demands a clear understanding of the technical interests and preferences of chapter members, innovative advance planning, and ready access to quality speakers and information sources. See the "Society Information" section for speaker ideas and contacts.

#### **Some Program Ideas:**

##### **Special Nights**

Many chapters set aside specific meetings to recognize or honor various groups, such as Awards Night, Alumni Night, Society Trustee Night, Past Chairs' Night, etc. The chosen topic for the meeting should be an interest area of the majority of anticipated attendees.

##### **Guest Night**

Guest Night can include a broad range of activities. Social activities such as pizza parties and campus activities are popular, and these are good activities for recruiting new members and networking with other societies.

##### **Career Night**

Career Night is intended primarily for high school students and should introduce the field of Materials. The speaker must be prepared to present the fun, challenges, and opportunities of a career in Materials.

##### **Plant Visits**

Plant visits are typically among the most popular chapter programs from an attendance standpoint. Some chapters have found guided plant tours of major industries of sufficient interest. Plant tours are held instead of, or in addition to, monthly technical meetings.

##### **Joint Meetings**

By communicating frequently with the local ACerS, AIST, ASM or TMS Professional Chapter/Section, technical meetings may be jointly sponsored by both chapters. Often, local chapters bring in Trustees and other accomplished speakers, and there is no reason not to take advantage of those visits. Many chapters hold joint meetings with other societies having a common interest in a particular subject. At a joint meeting, chapter business of either society should be avoided or kept to a minimum.

## **MATERIAL ADVANTAGE**

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### **STUDENT CHAPTER REBATES**

*To qualify for a student chapter rebate, a student chapter must be considered ACTIVE.* This means that the chapter submitted an Annual Report (and supporting documents) for the previous chapter year by the June 1 deadline.

INACTIVE chapters will **not** receive a membership rebate.

In previous years, Active Material Advantage Chapters received an annual rebate check in the form of \$5 for each active member as of September 1st. A change has been made so that this rebate will be calculated based on the number of students who have RENEWED their membership for the coming year by December 31st with the rebate checks being sent to the faculty advisor in January. This rebate enables chapters to get involved in more activities and develop stronger chapter programs. With this extension, the Fall Membership Challenge memberships your chapter has gained will be included, and the chapter will have extra time to gain more members.

The rebate check will be distributed to Faculty Advisors in January or February each year. The chapter rebate can be used in whatever manner the chapter feels is appropriate.

### **STUDENT CHAPTER REBATE TABLE**

<b>Membership Classification</b>	<b>Annual Dues</b>	<b>Rebate to Chapter</b>
Material Advantage Membership	\$30.00	\$5.00

# MATERIAL ADVANTAGE

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## COMMUNICATION

### Communication Standards

Chapters should be aware of some general communication standards that exist for the program. All references to the program should use the complete title of: “Material Advantage Student Program,” “Material Advantage Student Membership” or “Material Advantage Student Chapter Program.” This is the acceptable format agreed upon by each society.

Following are some standard programs and titles for related activities:

- ◆ (Name of University or chapter) Material Advantage Student Chapter
- ◆ “Everything Else is Immaterial...The Material Advantage Student Chapter Program”
- ◆ “Material Advantage” (program logo)
- ◆ Material Advantage: The Student Program for Materials Science and Engineering
- ◆ The American Ceramic Society (ACerS)
- ◆ The Association for Iron & Steel Technology (AIST)
- ◆ ASM International<sup>®</sup> (ASM)
- ◆ The Minerals, Metals & Materials Society (TMS)

Chapters should always refer to all societies in any materials regarding their chapter. Logo samples are available for chapter use upon request.

### Annual Report

The annual report must be completed before the end of the school year. The deadline for submission of the report is **June 1**. If cooperative education programs or a different schedule that affects officer elections and end of the year reporting affects a chapter, the officers are encouraged to complete the report in the Spring. The report can be found in the back of this Handbook, via the Material Advantage website and is also sent to the chapter in March via email. *If the annual report is not received by the deadline, the chapter will not be considered an ACTIVE chapter for the following year.*

### Officer Listing/Officer Change Report

Please submit this with the annual report every year. This is used to update the master database so that we know where to reach you.

**NOTE:** Starting in 2015, the above forms will be offered online and will no longer need to be emailed to ASM.

### Journals

If you would like to promote an activity of the chapter or share chapter news, please contact [students@asminternational.org](mailto:students@asminternational.org) with information. The information will be shared with all societies.

### Meeting Notices

You may receive separate mailings regarding student monitor positions for society meetings as well as promotion of activities at each annual meeting.

### Website

Chapters are encouraged to develop their own web sites to promote their activities and the field of materials science and engineering. Once a home page is developed, a chapter should contact ACerS to have a link to the Material Advantage site created. This is also a good tool for developing networking opportunities between chapters. For information about setting up home pages or access to logos and society information, see the contact page for contact information.

## **MATERIAL ADVANTAGE**

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### **CHAPTERS OF EXCELLENCE AWARDS**

The Chapters of Excellence Program rewards and recognizes student chapters for consistently good performance in areas that ACerS, AIST, ASM and TMS feel are beneficial to students and the community as a whole.

A committee of ACerS, AIST, ASM and TMS members selects the winning chapters. The selection is based upon the chapter Annual Report and supporting documents as outlined on the Chapters of Excellence criteria sheet, which is available on the website.

Winning chapters are recognized at the ACerS, AIST, ASM and TMS annual meetings. The winning chapters receive a cash award as well as a mounted certificate for the chapter. Chapters will also be recognized in *Ceramic Bulletin*, *Iron & Steel Technology*, *Advanced Materials & Processes* (ASM News) and *JOM*.

Refer to the attached Chapters of Excellence document or visit [www.materialadvantage.org](http://www.materialadvantage.org) for more details.

## MATERIAL ADVANTAGE

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### MEMBERSHIP CHALLENGE PROGRAM

The Membership Challenge Program is a recruitment contest between student chapters during the Spring (March) and Fall (October). Student Chapters are challenged to find creative strategies to increase their chapter membership during the designated period of time. The contest winners receive recognition and prizes for the most creative strategies and the highest percentage increase in chapter membership.

Student chapter membership levels are recorded as of the month prior to the Membership Challenge. At the end of the month, each chapter sends in new membership applications with the Challenge cover sheet, which are sent to the chapter at the beginning of the academic year. The prizes are outlined below:

#### Most Creative Recruitment Strategies

- ◆ Chapter must submit new member applications with a completed Membership Challenge cover sheet postmarked no later than the Monday following the designated Membership Challenge. (See mailings each Spring/Fall for details.)
- ◆ Chapter must send in a record of the recruitment activities and programs. A description of the recruitment strategies used as well as photographs showing the chapter spirit, recruitment activities, and new members should be included.
- ◆ The chapter that implements the most creative program to recruit new members while achieving a minimum 15% increase in membership will win this contest.

An article recognizing the winning chapter may be published in the *Bulletin*, *Iron & Steel Technology*, *Advanced Materials & Processes* (ASM News) and *JOM's* Professional Preface. In addition to the recognition, the chapter will receive a check for \$250.

#### Most Students Recruited

- ◆ Chapter must submit new member applications with a completed Challenge Cover Sheet postmarked no later than the Monday following the designated Membership Challenge. (See special mailings for details)
- ◆ Chapters will be evaluated on the percentage increase in membership from new Material Advantage student members.

The chapter with the highest percentage increase during the Membership Challenge may be recognized in the *Bulletin*, *Iron & Steel Technology*, *Advanced Materials & Processes* (ASM News) and *JOM*, and will receive a check for \$500.

#### Rules and Procedures

- ◆ Only new member recruits will count toward the chapter growth; renewal of existing membership will not be counted in this contest.
- ◆ Starting chapter membership size will be determined based on existing Material Advantage student membership as of March 1 (Spring) and October 1 (Fall). Only applications submitted with the cover sheet will be included when calculating chapter growth.
- ◆ Chapters will be considered for both categories; however, the same chapter cannot win both categories.
- ◆ Photographs submitted may be published and will not be returned.

Questions should be directed to the Material Advantage Student Membership Program: [students@asminternational.org](mailto:students@asminternational.org)

## MATERIAL ADVANTAGE

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### SCHOLARSHIPS

*(For the latest scholarship information, visit the material Advantage website.)*

#### **ACerS Scholarships**

The American Ceramic Society, as well as its Sections, Divisions and Classes, offer many student scholarships, awards, and contests. Please contact the Section, Division or Class noted or visit the ACerS Scholarship page on the Material Advantage website (<http://materialadvantage.org/financial-opportunities/acers-scholarships/>) for additional information. Deadlines for applications vary by scholarship.

#### ***Current scholarships and awards offered:***

- Du-Co Ceramics Scholarship Award
- ACerS Basic Science Division Graduate Excellence in Materials Science (GEMS) Awards
- ACerS Electronics Division Hoffman Scholarship
- ACerS Glass Division Norbert J. Kreidl Award for Young Scholars
- ACerS Glass and Optical Materials Division Alfred R. Cooper Student Award
- ACerS Glass and Optical Materials Division Student Poster Awards
- ACerS New Mexico Section Graduate Student Research Award
- ACerS Electronics Division Best Student Presentation Awards
- ACerS New England Section Scholarship Program
- ACerS New Mexico Section Undergraduate Ceramic Achievement Award
- ACerS Pittsburgh Section J. Earl Frazier Memorial Scholarship
- ACerS Southwest Section The Forrest K. Pence Memorial Scholarship Program
- ACerS Southwest Section - The Robert and Mary Buttle Scholarship Fund

#### **AIST Foundation Scholarship Program**

AIST Foundation Scholarships are awarded on an annual basis to talented and dedicated students to encourage them to pursue careers within iron and steel-related industries. Approximately \$400,000 is awarded each year through Foundation scholarships, endowment scholarships, Member Chapter scholarships, and joint scholarships and grants.

#### ***Current scholarships offered:***

- AIST Ronald E. Lincoln Scholarships (2 one-year scholarships at US\$3,000)
- AIST Willy Korf Scholarships (3 one-year scholarships at US\$3,000)
- AIST Don Nelson Scholarship (1 one-year scholarship at US\$3,000)
- AIST William E. Schwabe Memorial Scholarship (1 one-year scholarship at US\$3,000)
- AIST Benjamin F. Fairless Scholarships (3 one-year scholarships at US\$2,000)
- AIST David H. Samson Canadian Scholarship (1 four-year scholarship at US\$2,000)
- AIST Smith Graduate National/International Scholarship ( up to \$6,000)
- FeMET Scholarships (20 two-year plus internship scholarships at US\$5,000)
- StEEL Scholarships (20 two-year plus internship scholarships at US\$5,000)
- AISI / AIST Premier Scholarship (1 two-year plus internship scholarship at US\$10,000)

Applications are accepted beginning in December, application deadline is March 1. For more information visit the website at [www.aistfoundation.org](http://www.aistfoundation.org).

Questions should be directed to Lori Wharrey at 724-814-3044 or [lwharrey@aist.org](mailto:lwharrey@aist.org).

#### **ASM Foundation Scholarship and Award Program**

The ASM Scholarships support students studying metallurgy and/or materials science and engineering. Students who will be enrolled in the Fall with sophomore, junior, or senior standing at a college or university in the USA, Canada, or Mexico are eligible for these scholarships. Also eligible are students who will be enrolling in their final year of a community college degree or certificate program in the Fall. The scholarships range from \$500 awards to full-tuition.

***Current scholarships and awards offered:***

Materials Genome Toolkit

This opportunity is offered to U.S. undergraduate engineering programs to compete to receive a free license for cutting-edge materials design software and database packages. This effort is being launched to promote science-based computational materials design and engineering in undergraduate curriculum.

<http://www.asminternational.org/foundation/students/material-genome>

**Deadline: February 27**

Student Chapter Grants

To support Material Advantage student chapters in their outreach activities. Five awards of \$800 each.

<http://www.asminternational.org/foundation/students/student-chapter-grants>

**Deadline: March 1**

Undergraduate Scholarships

Up to 20 scholarships ranging from \$1,500 to \$10,000 are available to Material Advantage students.

<http://www.asminternational.org/foundation/students/undergraduate>

**Deadline: May 1**

Undergraduate Design Competition

To encourage the strengthening of design curricula in Materials Science & Engineering departments.

**First Prize:** \$2,000.00 + \$ 500 travel assistance + \$ 500 to the department for support of future design teams

**Second Prize:** \$1,500.00 + \$ 500 travel assistance

**Third Prize:** \$1,000 + \$500 travel assistance

<http://www.asminternational.org/foundation/students/design>

**Deadline: July 15**

**TMS Scholarships**

One of the benefits TMS student members enjoy is the opportunity to earn money for college through scholarships and student contests. Scholarships are awarded annually to graduate and undergraduate student members.

***Current scholarships offered:***

- TMS Presidential Scholarship (1 award at \$5,000)
- Electronic, Magnetic & Photonic Materials Division/Gilbert Chin Scholarship (1 award at \$2,000)
- Extraction & Processing Division Scholarship (4 awards at \$2,000)
- International Symposium on Superalloys Scholarship (2 awards at \$2,000)
- Light Metals Division Scholarship (3 awards at \$4,000)
- Structural Materials Division Scholarship (2 awards at \$2,500)
- Materials Processing and Manufacturing Division Scholarship (2 awards at \$2,500)
- TMS Best Paper Contest (Undergraduate and Graduate)
- Henry Dewitt Smith Scholarship (Graduate Award through AIME - 2 awards at \$2,500)

**The deadline for applications for all TMS scholarships and contests is March 15.** Information and applications will be available online at <http://www.tms.org/Students/AwardsPrograms/Scholarships.html>. For information on these programs, contact Bryn Simpson in the Student Affairs Department of TMS at (724) 776-9000 ext. 259, or e-mail at [bsimpson@tms.org](mailto:bsimpson@tms.org).

**For detailed information on the chapter awards, scholarships, student contests and competitions, please refer to the website: [www.materialadvantage.org](http://www.materialadvantage.org)**

## MATERIAL ADVANTAGE

ACerS, AIST, ASM International and TMS Student Program

### THE AMERICAN CERAMIC SOCIETY INFORMATION

#### What is The American Ceramic Society?

The American Ceramic Society is a 117-year-old non-profit organization that serves the informational, educational and professional needs of the international ceramics and glass community. More than 9,500 members comprise a wide variety of individuals and interest groups including engineers, scientists, researchers, manufacturers, plant personnel, educators, students, marketing and sales professionals, and others in related materials disciplines. ACerS is the gateway through which these diverse groups interact, exchange information, influence legislation, and develop tomorrow's technologies.

ACerS members participate and receive information through a structure of Divisions, Sections and Classes of the Society. Divisions segment the ceramic and materials field by industry category, Sections by local geographic areas, and Classes serve a specific purpose within the ceramics community.

#### Divisions of the Society

ACerS members participate and receive information at the national level through a structure of Society Divisions. ACerS has 10 Divisions that address all disciplines in technical ceramics:

**Art, Archaeology and Conservation Science** - advances the scientific understanding of the materials found in ceramic art, and provides information that aids in the interpretation, and preservation of traditional ceramic art and artifacts, as well as the techniques and technologies used in their creation.

**Basic Science** - focuses on the basic properties of materials.

**Cements** - involved with the research, development, manufacturing and sale of cements, limes and plasters.

**Electronics** - deals with capacitors, superconductors, electronic packages, sensors, semiconductors and other electronic devices.

**Engineering Ceramics** - examines advanced ceramics such as coatings and structural ceramics that are of monolithic or composite composition.

**Glass & Optical Materials** - focuses on the scientific research and development, application and manufacture of all types of glass.

**Manufacturing** - focuses on meeting the broader needs of today's manufacturers who produce or use ceramic and glass materials, including the entire supply chain, and addresses new manufacturing processes and techniques, sustainability, and business and environmental issues.

**Nuclear & Environmental Technology** - explores applications of ceramics in nuclear energy production and medicine.

**Refractory Ceramics** - examines the science, production and application of ceramics for use at elevated temperatures and in other hostile environments.

**Structural Clay Products** - emphasizes the most efficient and economical ways to manufacture brick, pipe, red-body tile and other structural clay products.

#### Classes and Affiliates of the Society

ACerS has two Classes and one Affiliate that provide valuable support to the Society:

#### Classes of the Society

1. National Institute of Ceramic Engineers (NICE): The National Institute of Ceramic Engineers (NICE) is dedicated to maintaining the ceramic engineering field as a distinct entity of professional engineering. Membership in this organization is free and is open to all engineers and scientists engaged in ceramics activity. ACerS/NICE is the lead organization responsible for accreditation of collegiate programs in glass and ceramic engineering through the Accreditation Board for Engineering and Technology (ABET). As an ACerS/NICE member, you can help shape both your own future and the future of engineering and could even end up being part of the accreditation process.
2. Ceramic Education Council (CEC): The Ceramic Educational Council (CEC) is an organization dedicated to stimulating, promoting and improving ceramics education and provides a national forum for discussing issues pertinent to ceramic education, curricula and institutional affairs. Its goal is to enhance interaction among those concerned with ceramic education. It also represents the Society in matters pertaining to ceramic education as specifically authorized by the Board of Directors.



## **Affiliate of the Society**

1. **Keramos:** The Keramos National Professional Ceramic Engineering Fraternity supports the interaction between and camaraderie among ceramic engineering professionals and students. One of the main functions of Keramos is to promote and emphasize scholarship and character in the thoughts of students in ceramics, to stimulate mental development, and to promote interest in the professional aspects of ceramic engineering, technology, and science.

NICE, CEC, and Keramos have a long-running history of student activities and programs. The following are four traditional contests organized for Material Advantage Students.

- **Undergraduate Student Speaking Contest**
- **Undergraduate Student Poster Contest**
- **Graduate Student Poster Contest**
- **Ceramic Mug Drop Contest**
- **Ceramic Disc Golf Contest**

## **Meetings and Expositions**

ACerS is the leading forum for knowledge exchange in ceramics and ceramic-related fields. The many meetings and symposia that ACerS sponsors range in size from 100 to 3,000 attendees and offer blends of technical sessions, expositions, and networking opportunities.

## **ACerS Publications**

ACerS Publications are the leading world resources on ceramic science and research:

- *Journal of the American Ceramic Society* (in partnership with Wiley Publishing)
- *International Journal of Applied Ceramic Technology* (in partnership with Wiley Publishing)
- *International Journal of Applied Glass Science* (in partnership with Wiley Publishing)
- *American Ceramic Society Bulletin/ceramicSOURCE*
- *Ceramic Engineering and Science Proceedings*
- The Society's Book Publishing Program –more than 200 book titles

Explore these and many other benefits available to society members at [www.ceramics.org](http://www.ceramics.org).

## AIST INFORMATION

On Jan. 1, 2004, the Iron & Steel Society (formed in 1974) and the Association for Iron and Steel Engineers (established in 1907) consolidated to form the Association for Iron & Steel Technology (AIST). Each predecessor organization possessed a rich historical background, but both recognized the need for a combined effort to serve the iron and steel industry. AIST was established with a goal of advancing the technical development, production, processing and application of iron and steel. The best practices of both predecessor organizations were incorporated into AIST, which is now a strong, international, member-based technical organization that can sustain itself in an environment of continual change.

**Technology Divisions** - AIST's 11 Technology Divisions include Technology Committees that address specific process, engineering, equipment or reliability technologies associated with the iron and steel industry. Members who serve on Operating Committees become an integral part of a vital network to solve problems and advance the state of technology within the industry. Committee activities include plant tours, conference program development, industry surveys, round table discussions and the development and maintenance of technical reports.

**Member Chapters** - AIST represents individual members in the iron and steel community from more than 60 countries around the world. To facilitate the exchange of ideas and strengthen our global network, AIST Member Chapters represent an integral component of the AIST program. Member Chapters offer steel industry professionals the opportunity to participate in AIST on a grassroots level. Our members meet and network with others from the local community while gaining valuable knowledge about many aspects of iron and steel production. A typical meeting includes a social hour, dinner and a technical presentation. Golf outings, plant tours, product fairs and other events may also be offered.

**Expositions and Conferences** – AIST's major international conferences bring together technologies from around the world, allowing steel producers and suppliers to compete in today's global marketplace. AIST will conduct its premier, full-line steel technology event, AISTech, each May. Our collaborative effort with other materials societies, MS&T, will take place each September. In addition, the various Technology Committees of AIST conduct specialty training courses that address specific needs in the practical application of engineering and steelmaking technology.

**Publications** – *Iron & Steel Technology* is a technical journal containing news articles for metallurgical, engineering, operating and maintenance personnel of the iron and steel and allied industries. It is the official monthly publication of AIST and the most comprehensive and widely circulated monthly technical journal available today for the steel industry. In addition, AIST publications include books and technical reports that are considered standards in the industry. Other effective communications tools available are [www.SteelLibrary.com](http://www.SteelLibrary.com), [www.SteelLinks.com](http://www.SteelLinks.com) and [www.SteelNews.com](http://www.SteelNews.com).

**Membership** - AIST offers a variety of activities and events each year. AIST members receive an annual subscription to *Iron & Steel Technology*, regular regional programs within the network of more than 20 AIST Member Chapters, access to more than 30 Technology Committees, discounted registration for major event forums, including AISTech and MS&T, discounted registration for all specialty training courses, discounts on numerous publications and free access to SteelNews.com. Together, these member benefits represent one of the most powerful networking tools available for the iron and steel industry.

**AIST Foundation** – The AIST Foundation is Pennsylvania-based 501 © (3) nonprofit corporation organized for charitable, education and scientific purposes that seeks to attract technology-oriented professionals to the industry by educating the public about the high - tech, diverse and rewarding nature of careers in modern steelmaking. Accordingly, the Foundation will award approx. \$ 400,000 in college scholarships and grants annually to provide assistance to these students. The mission of the AIST Foundation is to ensure the iron and steel industry of tomorrow will have a sufficient number of qualified professionals.

Visit the AIST Web site at [www.aist.org](http://www.aist.org) and [www.aistfoundation.org](http://www.aistfoundation.org).

## ASM INTERNATIONAL INFORMATION

### History

ASM was organized in 1913 in Detroit, Michigan, as the "Steel Treaters Club," by William Park Woodside. Chicagoans organized an "American Steel Treaters Society" in 1917, and the Detroit-Chicago groups amalgamated in 1920 as "American Society for Steel Treating." This became American Society for Metals in 1933. In 1983, the Society expanded its technical scope beyond metals alone to include other engineered materials—composites, plastics, ceramics, and electronic materials. By 1986, progress was so substantial toward the stated goal of becoming the world's society for engineered materials that the name was changed to ASM International. The Society's headquarters was in downtown Cleveland, Ohio, from 1920-1959, and has been in Materials Park, Ohio, (35 miles east of Cleveland) since. The Headquarters building is housed on 50 acres, underneath the world's largest open-faced geodesic dome. Constructed of 80 tons of extruded aluminum, the 103-foot-high dome is a dramatic tribute to modern materials technology.

### Members and Chapters

ASM has more than 27,000 members worldwide who are involved throughout the engineered materials community—as engineers, managers, scientists, researchers, teachers, students, marketers, equipment manufacturers and suppliers. The Society has more than 80 professional chapters, with members in more than 85 countries. Members work primarily with metals, but also with structural polymers, ceramics and composites.

### Affiliate Societies

Members may choose to affiliate with several of ASM's Affiliate Societies: The ASM Heat Treating Society (HTS), ASM Thermal Spray Society (TSS), International Metallographic Society (IMS), Electronic Device Failure Analysis Society (EDFAS), International Organization on Shape Memory and Superelastic Technologies (SMST) and Society of Carbide & Tool Engineers (SCTE). Affiliate Societies serve member needs with focused leadership, agendas and services. To affiliate with an Affiliate Society of ASM, one must first be a member of ASM International and pay annual "add-on" dues for each additional Affiliate Society membership (*except* for SCTE). EDFAS membership does not require ASM membership, but there is an add-on fee for ASM/EDFAS membership.

### Member Recognition and Society Activities

Nearly 20 awards are presented yearly to individuals and organizations for their outstanding achievements in the materials industry, including the distinction of ASM Fellow, bestowed on individuals for their contributions in materials science and engineering. ASM also is dedicated to advancing the materials science and engineering profession and nurturing the engineers of tomorrow. The ASM International Foundation supports student outreach activities from kindergarten to graduate school through Materials Camps, partnership programs, scholarships and student membership.

### Publications

*Advanced Materials & Processes (AM&P)*, the monthly magazine and a key benefit of membership, focuses on the latest trends and advances of materials technology of interest to ASM members. Included within *AM&P* is *ASM News*—a monthly overview of society and member news. Publications of other ASM Affiliate Societies include the *Journal of Materials Characterization* and the newsletter *Sliplines* (International Metallographic Society), the quarterly newsletter *International Thermal Spray & Surface Engineering* (Thermal Spray Society), the quarterly resource *Electronic Device Failure Analysis* (EDFAS), and *Cutting Tool Engineering* (Society of Carbide & Tool Engineers). The Society also publishes the following journals: *Journal of Materials Engineering and Performance*, *Journal of Thermal Spray Technology*, and *Journal of Phase Equilibria and Diffusion*. The journals *Metallurgical and Materials Transactions* and *International Materials Reviews* are co-published by ASM.

ASM is also renowned as a leading technical book publisher, with more than 150 book titles in print, including the *ASM Handbook* series, the world's most comprehensive reference source on metals and engineered materials. Many ASM references are now available in electronic form—either as CD-ROM's or on-line—including the *ASM Handbook on CD-ROM*. For the latest information and free demonstrations, visit the ASM Website at [www.asminternational.org](http://www.asminternational.org).

### Conferences & Expositions/Education

ASM and its Affiliate Societies sponsor or co-sponsor many leading events, including the Materials Science and Technology Conference & Exposition, the ASM Heat Treating Conference & Exposition, the International Thermal Spray Conference (ITSC), the Advanced Aerospace Materials/Processes Conference & Exposition (AeroMat), and the International Symposium of Testing and Failure Analysis (ISTFA).

Members wishing to improve their technical skills and knowledge, and managers who want to bring training to their staff, benefit from the many education programs offered by the ASM Education Department. Formats include home study, seminars, video, in-plant, and custom programs.

For a complete list of the Professional Chapters of ASM International, please check out the website: <http://www.asminternational.org>

## TMS INFORMATION

**TMS is the professional organization for those around the world dedicated to the science and engineering fields concerned with minerals, metals and materials.**

TMS was established following the founding of the American Institute of Mining Engineers (AIME) in 1871. The Society's work encompasses the entire range of materials science and engineering, from minerals processing and primary metals production to basic research and the advanced applications of materials. TMS members number over 11,000, live in more than 70 countries on six continents, and include engineers, scientists, researchers, educators, administrators and students. 55% of TMS members hail from industry, 27% from academia and 18% from government. TMS members are active throughout the organization, from the board of directors to the technical committees.

The mission of TMS is to promote the global science and engineering professions concerned with minerals, metals and materials. In support of this mission we will:

- ◆ Provide forums and other opportunities for: 1) The exchange of information among all segments of our community; and 2) Networking and making contacts vital to members' interests.
- ◆ Provide state-of-the-art means for disseminating information pertinent to the community
- ◆ Promote technology transfer and, thereby, the economic health of our industries
- ◆ Provide means for the professional development and career maintenance of members
- ◆ Assume a leadership role in the minerals, metals and materials community by promoting collaboration and alliances among minerals, metals and materials societies and organizations in order to strengthen the technological basis of the profession and our members
- ◆ Participate in the development of students for entry into the minerals, metals and materials professions
- ◆ Represent the minerals, metals and materials professions in the accreditation of education programs and in the registration of professional engineers
- ◆ Encourage professionalism, ethical behavior, and concern for the environment..

TMS' technical focus spans a broad range: light metals; electronic, magnetic and photonic materials; extraction and processing; structural materials; and materials processing and manufacturing.

From within these technical focus areas has emerged a new mission to make a difference in the world. TMS established the Materials and Society technical community for members to analyze energy use, consider waste reduction and treatment, and explore the use of materials in alternative energy technologies.

## TMS EVENTS

**The Minerals, Metals & Materials Society (TMS)** sponsors and co-sponsors several specialty meetings every year. In order to facilitate global technical exchange and networking, TMS convenes two annual, multidisciplinary meetings and several specialty meetings throughout the year. More than 400 technical sessions and 4,000 individual presentations are conducted annually. TMS also offers learning and networking opportunities through continuing education, publications, and the Web, [www.tms.org](http://www.tms.org) and [www.materialstechnology.org](http://www.materialstechnology.org). The TMS Annual Meeting and Exhibition, held in February or March.

## CLASSES OF MEMBERSHIP

### Student Membership

#### **Material Advantage Student Member ..... \$30.00**

Individual whose primary occupation is that of a student at a college or university and who wishes to be a member of ACerS, AIST, ASM and TMS. The membership fee gives students access to the benefits offered by all four societies. The membership year runs from January through December. See the application for specific membership fee information.

### Becoming A Professional Member Upon Graduation

**NOTE:** There is no Material Advantage membership option beyond the student level. Following graduation, separate professional memberships must be maintained. Information on professional membership options for ACerS, AIST, ASM and TMS will be mailed to students as they approach graduation.

#### **ACerS .....One-year Free**

ACerS will recognize you as an Associate Member of the Society with full benefits for the first year after graduation at *no cost*. This includes free online access to the peer-reviewed *Journal of the American Ceramic Society*, *International Journal of Applied Ceramic Technology*, and *International Journal of Applied Glass Science*. Please see the ACerS website for further details.

#### **AIST .....One-year Free**

AIST will provide a complimentary one-year AIST Young Professional Membership following graduation. As an AIST Young Professional Member, you are eligible for all of the benefits of an AIST professional membership. Visit [www.aist.org](http://www.aist.org) for a special application.

#### **ASM International .....One-year Free ASM**

will recognize you as a full individual member of the society for the first year after graduation at *no cost*. Simply complete and return the "Prepare To Succeed" application that will be sent to you via e-mail. By taking advantage of this special offer, you will be entitled to one free reference book along with all of the advantages of ASM professional membership including significant discounts on education courses, seminars, conferences, reference books and a variety of other benefits and opportunities that will help you in your career.

#### **TMS .....One-year Free**

TMS recognizes the financial demands on young engineers, and therefore will provide you with a complimentary full membership for one year following graduation. As an Automatic Junior Member, you are eligible for all of the same benefits as a TMS Professional Member. Please contact [members@tms.org](mailto:members@tms.org) for an application.

## Professional Memberships

**ACerS Regular Member**..... \$ **120.00**  
Includes free online access to the *Journal of the American Ceramic Society*, the *International Journal of Applied Ceramic Technology*, the *International Journal of Applied Glass Science*, print and online access to the Bulletin and ceramicSOURCE, and the online Membership Directory.

**Primary Division affiliation** is included with membership. Additional Divisions are available for \$10.00 each.

### **Other ACerS Society Affiliates**

National Institute of Ceramic Engineers (NICE) .....	FREE
Ceramic Education Council (CEC) .....	\$ 5.00
Keramos .....	\$ 10.00

**AIST Professional Member** ..... \$ **115**

Includes paper and electronic edition of *Iron & Steel Technology*

**AIST Young Professional (age 30 or younger)** ..... \$ **57.50**

Young professional membership is complimentary for the first year following Material Advantage student membership and graduation. Includes paper and electronic edition of *Iron & Steel Technology*. A member application must be completed.

**ASM International Individual Membership**..... **Annual Dues \$ 117.00\***  
A person interested in receiving member benefits and supporting the purpose of ASM.

**Heat Treating Society** ..... **ASM Dues + \$ 25.00**

A person interested in receiving member benefits of ASM and HTS.

**Thermal Spray Society** ..... **ASM Dues + \$ 30.00**

A person interested in receiving member benefits of ASM and TSS.

**International Metallographic Society**..... **ASM Dues + \$ 25.00**

A person interested in receiving member benefits of ASM and IMS.

**Shape Memory and Superelastic Technologies** ..... **ASM Dues + \$50.00**

A person interested in receiving member benefits of ASM and IMS.

**Electronic Device Failure Analysis Society**..... **Annual Dues \$ 88.00**

A person interested in receiving member benefits of EDFAS.

**TMS Professional Member** ..... \$ **115.00**

All TMS members are required to demonstrate one of the following to be an eligible candidate for professional membership:

- A baccalaureate degree in metallurgy, metallurgical engineering, materials science, or materials engineering, and at least 3 year's professional experience.
- A baccalaureate degree in science or engineering in a discipline other than identified and at least 5 years' professional experience.
- A baccalaureate degree from a recognized university in a discipline other than (a) or (b) and whose main activities lie in, but are not limited to, the development, management, administration, welfare, sales, or services to the minerals, metals and materials industries, with at least 7 years' experience.
- A credit in experience of one year for a master's degree or two years for a doctoral degree shall be granted.

**TMS Recent Grads** ..... \$ **57.50**

A recent graduate's Professional Membership is complimentary for the first year following Material Advantage student membership and graduation. For the second and third years of Professional Membership following graduation, the cost is \$57.50 per year.

**TMS Associate Member** ..... \$ **115.00**

Candidates for Associate Membership are persons of integrity who, while not possessing the academic or technical experience of a member, are active in fields that are sufficiently related to the advancement of, or service to, the minerals, metals or materials extraction, processing, or applications industry.

## SOCIETY MEETINGS AND CONFERENCES

For detailed information on any of the ACerS, AIST, ASM or TMS sponsored meetings, contact the society headquarters or visit the websites for each society.

### **ACerS Conferences & Expositions**

ACerS and its Affiliates sponsor and co-sponsor events and expositions consisting of: Electronic Materials and Applications in Orlando, FL, International Conference on Advanced Ceramics and Composites in Daytona Beach, FL, Materials Challenges in Alternative & Renewable Energy, International Conference on Ceramic Interconnect and Ceramic Microsystems Technologies, Pacific Rim Conference on Ceramic and Glass Technology, Ceramic Leadership Summit, MS&T, Glass & Optical Materials Division Spring Meeting, Structural Clay Products Division Meeting, Cements Division meeting, plus many more. Go to <http://ceramics.org/meetings/event-calendar/> to see the complete meeting schedule.

### **AIST Conferences & Expositions**

AIST's major international conferences bring together technologies from around the world, allowing steel producers and suppliers to compete in today's global marketplace. AIST will conduct its premier, full-line steel technology event, AISTech, each May. In collaboration with other materials societies, MS&T will take place each September.

### **ASM Conferences & Expositions**

ASM and its Affiliate Societies sponsor and co-sponsor many leading events, including the Materials Science and Technology Conference & Exposition (MS&T), the ASM Heat Treating Conference & Exposition, the Materials and Processes for Medical Devices Conference, the Advanced Aerospace Materials/Processes Conference and Exposition (AeroMat), and the International Symposium of Testing & Failure Analysis (ISTFA). For a complete listing of all ASM events, please visit the ASM website at [www.asminternational.org](http://www.asminternational.org).

### **TMS Events**

TMS sponsors and co-sponsors several annual meetings as well as specialty meetings. The Annual Meeting and Exposition features nearly 2,000 technical presentations and 20,000 square feet of exhibitions which detail the latest advances and most critical developments in minerals, metals, and materials science and technology. The Physical Metallurgy and Materials program focuses on new developments in materials research and applications and is held in conjunction with MS&T.

### **Student Activities at Society Meetings**

Each society will sponsor student activities that encourage student members to interact, have fun, learn about potential career options, network with potential employers, and learn about each society. Some student activities include:

- ◆ Career Forum
- ◆ Student/Faculty Mixer
- ◆ Student Focus Groups
- ◆ Student Monitoring Positions
- ◆ Student Speaking Contest
- ◆ Student Poster Contest
- ◆ Chapter and Individual competitions
- ◆ Other contests and competitions

## SOCIETY VISITS

The programming for student chapters often relies heavily on local experts and professionals to deliver technical and informational presentations at monthly meetings. Interaction with successful materials professionals and society representatives from outside the university's local area can enrich the student chapter's program.

As a student chapter, you may wish to invite staff or members from each partnering society to visit your chapter. You may have a big event planned for which you would like some national exposure or you may want to draw upon the technical expertise of prominent members. Often staff or member visits are planned in conjunction with the local ACerS section, AIST member chapter, ASM professional chapter or TMS local section. ACerS, AIST, ASM and TMS have directories available and staff will make every attempt to help you find the right speaker for your event. Planning ahead is important in order to allow for busy schedules and travel arrangements.

### ASM Staff and Trustees

Student chapters interested in scheduling a Staff or Trustee visit should contact the Chapter Relations office at ASM: [Students@asminternational.org](mailto:Students@asminternational.org) for information on the current Speaker's listing. This listing is an essential and valuable resource for chapters when they are planning their programming and lining up speakers for their technical meetings throughout the chapter year. If a Trustee or staff associate is planning a visit to a local professional chapter, the Faculty Advisor will be informed of the visit and meeting schedule. ASM Trustees or staff associates may also contact the chapter to schedule a visit. It is the responsibility of the chapter to coordinate the travel and meeting plans with any visitor.

### ACerS Staff and Board Members

Student Chapters interested in scheduling a Board Member/ACerS Staff visit should contact Tricia Freshour, Membership Services Manager, at [tfreshour@ceramics.org](mailto:tfreshour@ceramics.org) or by phone at 614-794-5827.

### AIST Staff and Board Members

Student Chapters interested in scheduling a Board Member/AIST Staff visit should contact Lori Wharrey at [lwharrey@aist.org](mailto:lwharrey@aist.org) at AIST.

### TMS Staff and Board Members

Student Chapters interested in scheduling a Board Member/TMS Staff visit should contact Bryn Simpson ([bsimpson@tms.org](mailto:bsimpson@tms.org)) at TMS for information on individual availability.

### Guest/Speaker Courtesies

At the meeting be sure that the speaker and guest (if applicable) receives a badge. Introduce the speaker to the chapter officers and other members on an informal basis. Be sure to allow time for a press conference if the speaker has cleared it. Check out any special equipment that the speaker has asked for and be sure to remind the speaker of how long the talk is expected to be.

### Introducing the Speaker

The introductory remarks made at the time a speaker is presented to the audience are important. Speeches of introduction need not be dull or stereotyped. A well-prepared introduction should make the audience more perceptive and appreciative of what the speaker is about to present. It should contribute to the speaker's stature in connection with the subject of the presentation by pointing out their experience or knowledge of the subject.

One way to organize your ideas in making a Speech of Introduction is to use the T-I-S formula, as follows:

**T** - stands for **TOPIC**. Speak first of the topic, giving the exact title of the talk.

**I** - stands for **IMPORTANCE**. Tell the audience why this topic is important to this particular group.

**S** - stands for **SPEAKER**. Give the audience your speaker's qualifications. As the final two or three words of your introduction, give the speaker's name; be sure to say it clearly and distinctly.

### Closing the Meeting

The meeting Technical Chairman can often make the difference between a satisfying experience for the audience or not. Many meetings fail because no one bothers to formally close them. Here are a few reminders:



- ◆ The Technical Chairman should control the closing period, assisting the speaker in taking questions from the floor.
- ◆ After a brief question period, which should last no more than 5 or 10 minutes, the Technical Chairman should close this period.
- ◆ If the subject is of particular interest, an area should be set-aside for members to talk one-on-one with the speaker while the arrangements person gathers the speaker's materials.
- ◆ If there is a continued part of the meeting, such as a business session, or a presentation to the speaker, etc., this should be done immediately after the formal question period, perhaps with a short break.

Following the meeting, be sure to see that the speaker is returned to the hotel or to the airport. A recognition letter within a week to both the speaker and the speaker's employer expressing the chapter's appreciation is appropriate. One courtesy which the chapter can extend depending on its budget is to present a gift or memento to the speaker at the close of the meeting. If any publicity appears in the local press, be sure to send a copy to the speaker.

## MATERIAL ADVANTAGE STUDENT CHAPTER REPORTS

All report forms can be found at [www.materialadvantage.org](http://www.materialadvantage.org)

### Standard Reports

#### **Material Advantage Chapter Annual Report**

The Chapter Annual Report is an essential document for the chapter to evaluate its progress and successes, and it is also the primary documentation that the societies maintain in the permanent chapter files. The chapter will not be considered active if the report is not received. A report reminder will be sent to the chapter chair and Faculty Advisor beginning in January; a copy can also be found in this Handbook. The Annual Report must be submitted *no later than June 1*.

#### **Material Advantage Chapter Officer List**

This form *must* be submitted with the Student Chapter Annual Report. The report should show the NEW officers for the upcoming year so that the headquarters listings can be updated.

#### **Material Advantage Chapter of Excellence Nomination**

This form *must* be submitted along with the Annual Report and Officer List by June 1, **IF** the chapter wishes to be considered for one of the six Chapter of Excellence Awards.

**NOTE:** For 2015, the above forms will be offered online and no longer need to be emailed to ASM.

### Chapter Petition Forms

#### **New Material Advantage Chapter Charter Application**

This form is used with the Petition Form when a new chapter is being formed.

#### **New Material Advantage Chapter Petition Form**

This form is used with the Chapter Charter Application when a new chapter is being formed.

#### **Material Advantage Chapter Conversion Form**

This form can be used for ACerS Only, AIST Only or Joint ASM/TMS student chapters to petition for a new Material Advantage Student Chapter Charter.

### Travel Reimbursement Form

#### **Material Advantage Chapter Travel Reimbursement Request Form**

This form gives chapters the opportunity to request funding for chapter attendance at ACerS Annual Meeting and ASM Annual Meeting both of which are held in conjunction with MS&T, TMS Annual Meeting and AISTech.

### Material Advantage Student Membership Applications

Material Advantage student membership applications are available directly on the Material Advantage website. Students may also apply or renew their membership directly on the Material Advantage website.

**For detailed information on travel grants and travel reimbursement, please refer to the website:**

[www.materialadvantage.org](http://www.materialadvantage.org)

# MATERIAL ADVANTAGE STUDENT CHAPTER ANNUAL REPORT COVER SHEET



The Student Program for Materials Science and Engineering

**Student Chapter Name:** \_\_\_\_\_

**Academic Year:** \_\_\_\_\_

**University** (if different from chapter name): \_\_\_\_\_

**The following items must be attached:**

- Annual Report
- Officer List for Upcoming Year
- Copy of Current Student Chapter Bylaws, *if updated in the past year.*

*I hereby support this chapter's annual report. The information contained within this report is accurate to the best of my knowledge.*

**Faculty Advisor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

*I hereby submit the attached Annual Report on behalf of my chapter. The information contained within this report is accurate to the best of my knowledge.*

**Submitted by:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**SUBMIT BY JUNE 1 TO:**

Material Advantage Student Chapter Program  
c/o Chapter & Student Relations  
ASM International®  
9639 Kinsman Road  
Materials Park, Ohio 44073-0002  
Fax: (440) 338-4634  
Email: [students@asminternational.org](mailto:students@asminternational.org)

# MATERIAL ADVANTAGE CHAPTER ANNUAL REPORT

Report should reflect activities during the past academic year (August—June).

## REGULAR CHAPTER ACTIVITIES

Number of Business, Technical or Educational Chapter Meetings: \_\_\_\_\_

Number of Guest Speakers not associated with the department at a chapter meeting: \_\_\_\_\_

Number of Guest Speakers associated with the department at a chapter meeting: \_\_\_\_\_

Regular Chapter newsletter or printed communication: Yes \_\_\_\_ No \_\_\_\_

Do you have a Chapter homepage? Yes \_\_\_\_ No \_\_\_\_

If yes, is it linked to the Material Advantage homepage? Yes \_\_\_\_ No \_\_\_\_

Other forms of visual or electronic communication to chapter (i.e., e-mail groups, bulletin board, etc.) Please list:

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

## MEMBERSHIP DEVELOPMENT ACTIVITIES

Number of applications for ACerS, AIST, ASM or TMS Scholarship contests: \_\_\_\_\_

Number of applications for ACerS, AIST, ASM or TMS Paper contests: \_\_\_\_\_

Number of Chapter Social Events: \_\_\_\_\_

Chapter recruitment program with at least 50% of membership involved :

... Membership Challenge Week

... Member Sponsor Program

... Spring Recruitment Program

... Chapter Program: \_\_\_\_\_

Career Resources, programs, or job fairs sponsored by chapter. Please list:

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

## SPECIAL CHAPTER ACTIVITIES

Number of Tours Taken at companies/corporations/ laboratories: \_\_\_\_\_

Attendance at ACerS, AIST, ASM or TMS Meetings by one or more members of chapter: Yes \_\_\_\_ No \_\_\_\_

Outreach Projects for K-12 students (demonstrations, presentations, workshops, support of department recruitment programs, etc.) Please list:

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

Community Service/Campus projects/Fund Raising Events. Please list:

1. \_\_\_\_\_ 3. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_

Faculty Advisor appreciation/ recognition efforts. Please list activity:

**LOCAL CHAPTER/SECTION RELATIONS**

Joint Activities held with Local ACerS Section, AIST Member Chapter, ASM Chapter or TMS Section : Please list:

1. \_\_\_\_\_ 3. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_

Attendance at Local Chapter/Section Meeting by one or more members of chapter: Yes \_\_\_\_\_ No \_\_\_\_\_

Student Member or Faculty Advisor sits on Executive Committee: Yes \_\_\_\_\_ No \_\_\_\_\_

Regular communication with nearest local chapter/section (newsletter, calls): Yes \_\_\_\_\_ No \_\_\_\_\_

**OTHER SIGNIFICANT ACTIVITY**

*Please describe:*

**Additional information may be attached.**

# MATERIAL ADVANTAGE STUDENT CHAPTER OFFICER LIST

Chapter Name: \_\_\_\_\_ Academic Year: \_\_\_\_\_

<b>FACULTY ADVISOR</b>	
Name: _____	Member I.D.#: _____
Preferred Mailing Address: ...Home	...Business
Phone: _____	_____
Address: _____	_____
_____	_____
E-Mail: _____	_____

<b><u>CHAIR</u></b>
Name: _____
Member I.D.#: _____
College Mailing Address: _____
_____
_____
Phone: _____
E-Mail: _____

<b><u>SECRETARY</u></b>
Name: _____
Member I.D.#: _____
College Mailing Address: _____
_____
_____
Phone: _____
E-Mail: _____

<b><u>VICE-CHAIR</u></b>
Name: _____
Member I.D.#: _____
College Mailing Address: _____
_____
_____
Phone: _____
E-Mail: _____

<b><u>TREASURER</u></b>
Name: _____
Member I.D.#: _____
College Mailing Address: _____
_____
_____
Phone: _____
E-Mail: _____

Submit with the Student Chapter Annual Report

## **MATERIAL ADVANTAGE STUDENT CHAPTER OF EXCELLENCE PROGRAM**

### **SUMMARY**

The Chapters of Excellence Program rewards and recognizes Student Chapters for consistently good performance in areas that ACerS, AIST, ASM and TMS feel are beneficial to students and the community as a whole. In order to enter the Chapters of Excellence Program, the Chapter must submit a report on or before June 1. The Chapter must also submit the annual report and be an active Material Advantage Student Chapter.

All entries received before June 1 will be judged by a panel of experts nominated by ACerS, AIST, ASM and TMS. The following awards will be presented at MS&T:

- **Most Outstanding Chapter (1).** This Chapter will score the highest, according to the judging criteria listed later, taking all categories into consideration.
- **Excellent Chapter (5).** These Chapters will demonstrate overall excellence by scoring well on the judging criteria listed later.

### **ELIGIBILITY**

1. Active Material Advantage Student Chapters which have submitted the annual report and who have their by-laws on file are eligible.
2. The Chapters of Excellence Report, in the appropriate format, must be received by June 1 to be considered. Late entries will not be accepted. Early submissions are welcome.

### **PRESENTATION OF AWARDS**

Awards will be announced, and plaques will be presented at the Student Award Ceremony during the MS&T event each fall.

### **AWARD CRITERIA**

The following categories, which ACerS, AIST, ASM and TMS believe add value to the student membership, will be judged independently on a scale of 1 to 5, with 5 being outstanding and 1 being poor. Scores from each category will be added up, along with a ranking describing the overall quality of the report. The Chapter that receives the highest total score will receive the Most Outstanding Chapter Award. Up to 5 Chapters will receive Excellent Chapter Awards based on their total scores. Cash prizes and plaques will be awarded to each Chapter that receives Outstanding or Excellent designations.

The Excellence criterion is listed below along with brief descriptions of what should be included in the report.

- **Programming.** Describe programming activities that the Chapter conducted over the academic year. NOTE: Only describe programming activities that originated from the Student Chapter, and which would not have occurred without Student Chapter initiative. Do not simply list the Departmental Seminar Series, even if it was ‘co-sponsored’ by the Chapter. Adding value will be rewarded in this category. Discuss how the programming originated. Non-technical programming and Chapter-sponsored plant trips or field trips are also of value.
- **Career Development.** Describe activities including (but not limited to) programming, technical meeting attendance, Chapter-organized plant trips, and special career-based events that fostered student member career development.
- **Service.** Describe outreach and service activities that the Student Chapter organized or participated in during the year, including (but not limited to) outreach programs designed to foster an awareness of materials to K-12 students, majors to materials-based careers; community or campus service activities.
- **Social Activities.** Describe social activities conducted by the Chapter. Discuss level of participation, and benefits to the students and the community as a whole.

- **Chapter Management.** A strong Chapter requires membership development activities, sound management, and record keeping. Describe management procedures, including elections, finances, reporting duties, recruiting activities, record keeping, Chapter web site, etc. Describe how the Chapter ensures continuity of excellence from year to year. Elaborate on level of participation in meetings and Chapter events. How does the Chapter recruit students into the Material Advantage Student Membership program, and how successful are these efforts?

### **REPORT FORMAT**

- Reports must be submitted electronically in Adobe .pdf format to [students@asminternational.org](mailto:students@asminternational.org)
- Include a cover page, and a brief overview of the Chapter – no more than 2 pages, less than that will NOT be penalized.
- Include sections with titles that match the excellence categories listed above, in the order given above. Each section must be no more than 3 pages, including figures, tables or photos. Do not feel any pressure to fill 3 pages per section; content is more important than length.
- Include a letter of support from the Chapter Faculty Advisor
- Include a good photograph of the officers from the academic year covered in the report – not incoming officers. Identify them by name and office.
- A calendar of events may be attached if desired, but this is not required.
- An optional summary page may be included.
- Do not include additional information or appendices.



## **Active Material Advantage Chapters 2014-2015**

Aalto  
Alabama at Birmingham, University of  
Alabama, Tuscaloosa, University of  
Alberta, University of  
Alfred University  
Arizona State University  
Arizona, University of  
Boise State University  
Boston University  
Bradley University  
British Columbia, University of  
California Berkeley, University of  
California Irvine, University of  
California Polytechnic State University -Pomona  
California Polytechnic State University -San Luis  
Obispo  
California University at Davis  
California University of - San Diego  
Capitulo UDEM  
Carnegie Mellon  
Case Western Reserve University  
Central Florida, University of  
Clemson University  
Colorado School of Mines  
Columbia University  
Connecticut, University of  
Delaware, University of  
Drexel University  
Florida International University  
Florida, University of  
Georgia Institute of Technology  
Houston, University of  
Idaho, University of  
IIT Kanpur  
IIT Roorkee  
IIT-Madras  
Illinois Institute of Technology  
Illinois Urbana Champaign, University of  
Iowa State University  
IST Pakistan  
Kentucky, University of  
Lehigh University  
Maryland, University of  
McGill University  
McMaster University  
Michigan Tech  
Michigan, University of  
Minnesota, University of  
Missouri S&T  
Montana Tech  
New Mexico Institute of Mining and tech  
North Texas, University of  
Northeastern University  
Northwestern University  
O.P. Jindal Institute of Technology  
Penn State  
Petroleum & Energy Studies, University of  
Portland, University of  
POSTECH  
PSG College of Technology - Coimbatore  
Puerto Rico Mayaguez, University of  
Purdue University  
Rensselaer Polytechnic Institute  
Rice University  
Robert Morris University  
Rutgers University  
San Jose State University  
SD School of Mines and Technology  
State University of Maringa (South Brazilian)  
Suez University  
Tennessee-Knoxville, University of  
Texas A&M University  
Texas El Paso, University of  
Texas Pan American, University of  
Texas-Arlington, University of  
Texas-Austin, University of  
The Ohio State University  
Toronto, University of  
Trine University  
UANL-FIME  
UFMG (Federal University of Minas Gerais)  
UFOP (School of Mines)  
UNAM-SIQMA  
Universidad Nacional de Colombia, Medellin  
Utah, University of  
Virginia Tech  
Washington State University  
Washington, University of  
West Virginia University  
Wisconsin-Madison, University of  
Wisconsin-Milwaukee, University of  
Worcester Polytechnic Institute  
Wright State University

