# **STMA**inaction

# Going Once, Going Twice, SOLD! SAFE Needs Auction Items

he SAFE fundraising events are just around the corner, and SAFE needs items donated to make them a success. Held at the annual STMA conference each year, the auctions and raffles fund two very important activities: scholarships and student challenge winning team awards.

Typical items donated for the Silent Auction include team gear, sports memorabilia, gift certificates to restaurants and sporting events, sports field related products and much more. The Silent Auction is held during the STMA trade show, on the show floor, and new items are added daily.

Tickets for the Large Item Raffle are sold throughout the conference with the drawing held right before the STMA Annual Awards Banquet Friday, January 14. Turf equipment, GPS systems, and new many technology devices, such as the iPhone, have been raffled in previous years.

The Live Auction, also conducted before the banquet, has sold vacation packages, race events, one-of-a-kind signed sports gear, unique wines, and much more.

## Meet Andrew Hoiberg, a 2009 Scholarship Recipient

"Winning the Dr. James Watson Graduate Scholarship was a huge honor for me," says Hoiberg. He received the 2009 STMA Watson Scholarship, which is awarded to the top candidate who is pursuing an advanced degree in turfgrass research. The award is sponsored by Toro's foundation and is named in honor of Dr. James Watson, a long-time green industry researcher and consultant. "The Watson Scholarship helped immensely with some of the costs associated with graduate school in our current economic climate and was a reminder that we all work together in the Sports Turf community," adds Hoiberg.

Hoiberg believes that being in the industry for several years before attending graduate school at Iowa State University was beneficial. "Being a member of STMA for many years as an industry professional prior to attending graduate school, I was aware of the hard work that graduate students put forth to make ends meet and to further scientific knowledge in our community," he says.

His goals are to make an impact on the profession in several ways. "When I finish my Ph.D. at Iowa State, I hope to secure a faculty position where I can further and renew my research objectives, provide extension services for local and national Sports Turf managers, and help shape the future for undergraduate and graduate turf students," Hoiberg says.

He is already has a great start on achieving his goal of advancing the profession. He is presenting twice at this year's national conference. On Friday, January 14, he will be presenting "Research You Can Use: Seedbanking, Seeding Rates, and Increased Nitrogen Fertility." The presentation will focus on his research at ISU, and he'll report findings about seeding once versus seeding multiple times through the season and how these schedules affect turf cover. At a roundtable, later that afternoon, he and David Minner, Ph.D., will be available for questions regarding this research.

Please help SAFE continue to award scholarships to deserving students like Hoiberg. Send a donation for our raffles and auctions to SAFE/STMA Headquarters, 805 New Hampshire, Ste. E. Lawrence, KS 66044, or bring them with you to the conference.

# Meet the 2011 Candidates for the Board

**The STMA Nominating Committee** has completed its work and presents the following Slate of Candidates to the Membership for the 2011 election. The ballots have been mailed to STMA voting members, and they are due back to head-quarters by midnight on Dec. 17.

The Nominating Committee has slated:

## **For Immediate Past President**

Chris Calcaterra, M.Ed., CSFM, CPRP, City of Peoria Sports Complex, Peoria, AZ

## **For President**

Troy Smith, CSFM, Denver Broncos Football Club

## For President-Elect

James Michael Goatley, Jr., Ph.D., Virginia Tech, Blacksburg, VA

For Secretary/Treasurer (Two Candidates) Martin Kaufman, CSFM, Ensworth Schools, Nashville, TN OR David Pinsonneault, CSFM, CPRP, Town of Lexington, Lexington, MA

## For Director - Professional Facilities

(Two Candidates) Allen Johnson, CSFM, Green Bay Packers, Green Bay, WI OR

Chris Ralston, Sacramento Rivercats/Raley Field, W. Sacramento, CA

## For Director - Schools K-12 (Two Candidates)

James Cornelius, CSFM, West Chester Area S.D., West Chester, PA OR Mike Tarantino, Poway USD, Poway, CA

## **For Director - Commercial**

Rene Asprion, Diamond Pro/TXI, Dallas, TX OR Paul Hollis, Redexim North America, Fenton, MO

## For Director - At Large

Jeff Fowler, Penn State Cooperative Extension, Franklin, PA OR Kevin Meredith, CSFM, Wright Soccer Complex, Oneonta, NY Returning Board Members (1 year left in term) **Commercial Vice President:** Chad Price, CSFM, Carolina Green Corp., Indian Trail, NC

**Director - Higher Education:** Ron Hostick, CSFM, San Diego State University, San Diego, CA

**Director - Academic:** Pam Sherratt, The Ohio State University, Columbus, OH

**Director - Parks and Rec:** Vacant due to David Pinsonneault, CSFM, CPRP slated for Secretary/Treasurer. This position will be filled by appointment of the President per the STMA Bylaws.

To view more information about each candidate, go to STMA's website, www.STMA.org and click on STMA Election information.

STMA accepts ballots through the mail, fax or electronically. Specific instructions are included on the ballot about the procedure to return it to STMA to insure that it qualifies to be counted, yet maintains the voter's anonymity.

The Nominating Committee is comprised of Chair Abby McNeal, CSFM, and members Andrew McNitt, Ph.D.; Mary Owen; David Rulli; Mike Trigg, CSFM; Lynda Wightman, and Steve Wightman.

# **STMAinaction**

## **Donate Your Time - Volunteer for a Committee**

**AS A NON-PROFIT ASSOCIATION**, STMA relies on dues, sponsorship and advertising dollars to fund the services it provides back to the membership. The gift of time through volunteering is regarded equally as significant and important to STMA as these monetary contributions. Volunteering on a committee provides the association with vital insight and perspective from the membership on its programs and services.

Most committees meet via conference calls, and depending upon the committee's charges for the year, they may meet via phone as few as twice during the year, or as frequently as twice a month for several months. These calls offer a great opportunity to meet and learn from others, offer your viewpoint and help to advance the work of STMA. Appointments are for one year beginning on March 1, with each committee comprised of generally 10-12 members.

At the annual conference in Austin, all current committee members are invited to a short meeting Wednesday, January 12, 6-6:30 p.m. Each current committee member will receive an invitation and agenda before the conference. It is a future goal of the association to carve out more significant time during the annual conference for all committees to meet.

Please sign up using the form below or via www.STMA.org even if you are currently serving on a committee. The deadline to volunteer for a committee is Feb. 1. President Troy Smith will be making the committee appointments by March 1. He may also be creating panels of members, as needed, to provide feedback electronically on specific issues affecting the association.

For 2011, the STMA Board of Directors has moved two task groups to Standing Committees due to the expanding and enduring nature of their work. These new committees are: **Environmental:** To develop environmental strategies that position STMA and its members as leaders in environmental stewardship and the overlapping health and safety issues that impact fans and players.

**International:** To position STMA as a global leader in sports facility management and make STMA the 'go-to' resource for those who work internationally in the industry.

The other standing committees include:

Awards: To judge the association's awards program applicants selecting the Field of the Year winners and the Minor League Baseball Sports Turf Manager of the Year; to develop strategies to enhance the programs. (This Committee meets physically in November in Kansas City, MO)

**Bylaws:** To develop association bylaws, which are fair and enforceable, and clearly define the expectations for membership, governance processes and board of directors' service.

**Certification:** To develop strategies to grow the number of certified members; to consistently monitor the program and recommend enhancements to ensure that the program is the top achievement for sports turf managers.

**Chapter Relations:** To create a chapter structure that is beneficial locally and nationally; to financially assist chapters with their administrative, operations and educational efforts; to facilitate the sharing of best practices.

**Conference:** (Conference Education, Exhibition, and Tours subcommittees) To develop all content, sessions, workshops and off-site venues, and select speakers and moderators for the next year's conference that will make it a "must attend" event for members and nonmembers; to recommend strategies that will drive attendance to the exhibition and will add value to exhibitors.

**Editorial:** To insure that the STMA magazine contains information relevant to the sports turf manager; to provide ideas and contacts for articles for publication.

**Ethics:** To provide a fair and unbiased council to investigate claims of ethics violations, determine if the claim has merit, and shepherd the appeals process. (This Committee is called into operation only if there is an ethics violation claim).

**Finance & Audit:** To provide oversight of the STMA's financial resources by reporting information to the Board of Directors.

**Historical:** To preserve the history of the association and the profession.

**Information Outreach:** To develop educational and informational opportunities for members to enhance their personal and professional development.

**Membership:** To develop initiatives to drive membership growth and retention; to recommend programs that add value for each member.

**Past President's Advisory Council:** Purpose: To advise the STMA Board on issues pertaining to the past, present and future of STMA. (Limited to STMA Past Presidents)

**Scholarship:** To judge the recipients of the SAFE Scholarships and the Terry Mellor Grant; to develop strategies to enhance the programs.

**Technical Standards:** To help determine standards and best management practices needed in the profession and to guide the work of the ASTM on developing sports field and facility standards.

**Website:** To insure that the STMA website contains information relevant to members, prospects and the green industry in an easily accessible and consumable format.

**STMA ALSO HAS A NOMINATING COMMITTEE** that is appointed directly by the Nominating Committee Chair. The chair is always the Immediate Past President, as defined by the Bylaws. Thus, Chris Calcaterra, M.Ed., CSFM, CPRP will assume that role for 2011.

## STMA Committee Volunteer Form

· · · · · ·

Committee appointments are for a one-year term of service beginning in March. Please fill out a new form annually.

Name	
Facility	
Chapter	
E-Mail	
Telephone	

. . . . . .

Facility/Industry Representation (check one) Facilities used by Professional Athletes							
□ Higher Education	□ Schools K-12	□ Parks & Recreation	□ Academic	Commercial	□ Student		

Name of Committee on which you are interested in serving:

Take the Conference Education Home with You

TMA is committed to providing current, relevant education to every member. This year at the 2011 STMA Conference and Exhibition, IntelliQuest Media (IQ Media) is partnering with STMA to provide recorded educational sessions. IO Media digitally audio records presentations and synchronizes them with approved speaker PowerPoints and handouts. These recordings will benefit conference attendees unable to make it to concurrent sessions and sports turf managers unable to make it to the conference. The recordings are also valuable as a refresher throughout the year for sports turf managers to stay current and educated in the industry.

The 2011 Conference has an exciting line up of speakers and topics. The broad range of information covered in presentations includes sustainability, field and facility construction, water conservation, agronomic issues and research, professional development, new developments in the industry, money saving techniques, and synthetic sports field issues. Speakers include sports turf managers, academics, and commercial members at the forefront of the sports turf industry.

Members and nonmembers have the option of purchasing individual education sessions on audio CD for \$17. The complete set of recorded sessions is available on MultiMedia DVD-ROM at \$159 for members and \$199 for nonmembers. These prices are available onsite and two weeks following the conference on the STMA website. January 31 prices increase to \$199 for members and \$259 for nonmembers. Make sure to take advantage of this valuable opportunity to enhance your education and stay current with industry trends and research!

# STMA Playing Conditions Index (PCI)

TMA rolled out the Playing Conditions Index (PCI) package at its annual conference in 2009. Developed to assess the playability of your fields, the PCI is used to provide a snapshot of your fields' playability at a specific point in time. The continued use of the assessment tool provides invaluable information to the sports turf manager and can help guide field management practices, assist with communication to user groups, can help to substantiate the need for more resources, and as needed provides a way to provide information to the media relations department. The package contains a Media Advisory Bulletin with instructions to help convey information on field conditions and its effect on athlete performance to sports information professionals on game days.

The STMA PCI is currently in a worksheet form that allows the Sports Turf Manager to allot points for each question and then total the points, giving the STMA PCI for that field at that time. There are detailed instructions on the cover sheet of the STMA PCI to help guide you through the process. If you have any questions while filling out the STMA PCI, please contact STMA at 800-323-3875 or PCI@STMA.org.

## Ask a CSFM Lawrence Berry, CSFM, Director of Physical Plant, Lee University, Cleveland, TN Benefits of certification verified ducing our great school to someone who otherwise may not have thought or known

**Editor's note:** This is another installments on how becoming a Certified Sports Field Manager (CSFM) can benefit turf managers professionally as well as improve their facilities

# How did you prepare for the CSFM Exam?

**Berry:** I prepared by referencing the study resource list and utilizing libraries and other avenues (internet, etc.) to acquire and read. I knew areas that I was weaker in and I focused on those disciplines more.

## How did you approach your employer to support your certification, both financially and in the time needed to prepare for the exam?

**Berry:** I put together a formal proposal that outlined the benefits of being a CSFM. This was centered on how it would make me more valuable to my employer but also highlighted other benefits that would help draw positive attention to my employer.

# Why did you decide to pursue certification?

**Berry:** To be totally honest I just wanted to see where I stood among my peers with my knowledge in the industry. I also enjoyed working with other groups, schools, etc and knew this would help legitimize me as a knowledgeable reference for them.

# How has certification helped your career?

**Berry:** Certification has helped in several ways. The combination of being a CSFM and the involvement in the turf industry has brought positive publicity to my employer. Our institution realizes that having their name in print with various outlets helps to draw attention to us and can be a way of intro-

ducing our great school to someone who otherwise may not have thought or known about us. My employer realizes the benefits and supports by allocating the resources for me to stay involved. I also have been referenced quite often for consulting, speaking engagements, and career advice. Obviously the more you can do these things the more stock you invest into yourself and the more valuable you become.



## **BEAM CLAY**<sup>®</sup> **INFIELDS!**



Beam Clay® has supplied products to every Major League Baseball Team and over 150 Minor League Teams, more than 700 colleges and thousands of towns and schools from all 50 states and worldwide. Beam Clay® supplies special mixes for infields, pitcher's mounds, home plate areas, red warning tracks, infield conditioners, drying agents, plus over 200 other infield products, including regional infield mixes blended for every state and climate from bulk plants nationwide!

**BEAM CLAY®** 800-247-BEAM (2326) WWW.BEAMCLAY.COM





- TARGETED LEADS SUPERIOR PENETRATION
- PROVEN VALUE
- OUTSTANDING RESULTS

Then rent our list of targeted, qualified readers for your next direct mail promotion.

Call today for more information regarding our product lines and extensive database marketing programs.



**Cheryl Naughton** cnaughton@m2media360.com 678-292-6054 Fax: 360-294-6054

# STMA Affiliated Chapters Contact Information

Sports Turf Managers Association of Arizona: Chris Walsh cwalsh@scottsdaleaz.gov

**Colorado Sports Turf Managers Association:** www.cstma.org

Florida #1 Chapter (South): 305-235-5101 (Bruce Bates) or Tom Curran CTomSell@aol.com

Florida #2 Chapter (North): 850/580-4026, John Mascaro, john@turf-tec.com

Florida #3 Chapter (Central): 407-518-2347, Randy Fisher, rfisher@kissimmee.org

Gateway Chapter Sports Turf Managers Association: www.gatewaystma.org

**Georgia Sports Turf Managers Association:** www.gstma.org

Greater L.A. Basin Chapter of the Sports Turf Managers Association: www.stmalabasin.com

Illinois Chapter STMA: www.ILSTMA.org.

Intermountain Chapter of the Sports Turf Managers Association: www.imstma.org.

**Iowa Sports Turf Managers Association:** www.iowaturfgrass.org.

Kentucky Sports Turf Managers Association: www.kystma.org.

**Keystone Athletic Field Managers Org.** (KAFMO/STMA): www.kafmo.org

Michigan Sports Turf Managers Association (MiSTMA): www.mistma.org

Mid Atlantic Sports Turf Managers Association (MAST-MA) (formerly the Chesapeake Chapter STMA) Ph. 410-704-2197 www.mastma.org

Minnesota Chapter STMA: www.mstma.com.

**MO-KAN Sports Turf Managers Association:** www.mokanstma.com. (See Expanded Profile included in Chapter Highlights)

Nebraska Sports Turf Managers Association: 402/441-4425.

New England STMA (NESTMA): www.nestma.org.

Sports Field Managers Association of New Jersey: www.sfmanj.org.

Sports Turf Managers of New York: www.stmony.org.

North Carolina Chapter of STMA: www.ncsportsturf.org.

Northern California STMA: www.norcalstma.org.

**Ohio Sports Turf Managers Association (OSTMA):** www.ostma.org

Oregon STMA Chapter: 503/953-9406

Ozarks STMA: www.ozarksstma.org

Pacific Northwest Sports Turf Managers Association: www.pnwstma.org

Southern California Chapter: www.socalstma.com.

South Carolina Chapter of STMA: www.scstma.org.

# Chapter Sponsors





JOHN DEERE

**Tennessee Valley Sports Turf Managers Association** (TVSTMA): www.tvstma.com

Texas Sports Turf Managers Association: 866/897-8621.

Virginia Sports Turf Managers Association: www.vstma.org

Wisconsin Sports Turf Managers Association: www.wstma.org. (See Expanded Profile included in Chapter Highlights)

## **Forming Chapters:**

Indiana Chapter: Joey Stevenson, jstevenson@indyindians.com

**STMA International Affiliate** 

**Organizations:** National Parks, Singapore: www.nparks.gov.sg Sports Turf Association, ON, CANADA www.sportsturfassociation.com

**Forming International Affiliate** Organizations Irish Institute of Sport Surfaces Institute of Groundsmanship

Yes, please start/continue my EPEE subscription to Sportsturf	Advertiser	Page #	ISERS' INDEX Web Addres
FREE subscription to <i>Sportsturf</i> FOR FASTER SERVICE visit our web site at	Barenbrug USA		www.barusa.com
http://www.submag.com/sub/tf or fax to 847-763-9569	Beacon Athletics		www.beaconathletics.com
No, thank you.	Beam Clay		www.beamclay.com
Which version would you like to receive?	Colbond		www.colbond-usa.com
gnature: (required) Date:	Covermaster		www.covermaster.com
me: (please print)	CoverSports USA		www.coversports.com
e:	Fleet US		www.fleetus.com
mpany:	GreensGroomer		www.greensgroomer.com
dress:	Hydraway Drainage		www.hydraway.ne
y: State: Zip:	Kromer Company		www.kromerco.cor
ne: Fax:	Krylon		
til: (required)		2	www.ki-lineup.com
ember 2010 - Expires May 2011 - RS1012 Vhat is your company's primary business? (check ONLY ONE)			www.z-spray.cor
□ Sports Complex G □ Athletic Field and/or Park Architect/Designer □ School, College or University P □ Park H □ Other ( <i>please specify</i> )			
hich of the following best describes your title? (check ONLY ONE)  EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General			.worldcampus.psu.edu/STM
Manager, Chairman of the Board, Purchasing Agent, Athletic Director MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance	Pioneer Athletics		www.pioneerathletics.com
Manager, Foreman, Supervisor GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official	Redexim Charterhouse		www.redexim.com
SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified     Specialist	Sports Turf Managers Associ	iation .3, 27	www.stma.or
COACH E Other (please specify)	Stabilizer Solutions		www.stabilizersolutions.com
o you have the authority to buy, specify or recommend products nd/or services for your business or organization?	Synthetic Surfaces		www.nordot.cor
early operating expenditures (excluding salaries)	TifSport Growers Association	on25	www.tifsport.com
□ Over \$1 million C □ \$50,001 - \$10,000 □ \$500,001 - \$1 million B □ \$25,001 - \$50,000 □ \$100,001 - \$500,000 A □ \$25,000 and under	Turf Time Equipment		www.TurfTimeEq.cor
ease also send a free subscription to the following people at the	West Coast Turf		www.westcoastturf.com
ime location	World Class Athletic Surface	es	www.worldclasspaints.com
Name Title			



Visit www.sportsturfonline.com and click on "E-newsletter" to register quickly

www.stma.org

Cut Here d



Now you can access all the latest news and events anywhere, anytime. Simply visit www.sportsturfonline.com/mobile4 to stay connected.







**BY DR. DAVID MINNER** Professor, Iowa State University

#### **Questions?**

Send them to David Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011 or email dminner@iastate.edu.

Or, send your question to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady\_miller@ncsu.edu.



# Not happy!

The athletic director was not happy with the football field at the end of the season and he wants to replace it with synthetic turf, but they just can't afford it. I've been able to reseed and get a reasonable stand of grass back before football season each year but it quickly wears down to dirt by the middle of the next season. He wants a plan and some assurance that the plan will grow better grass before he spends the money. He's not happy, can you help?

I frequently get this type of call throughout the north central region of the US and here is how the conversation goes. Always ask specifically what they don't like about the field and, just as importantly, what field meets expectations for their level of play. Go to that field manager with the better field and find out what they are doing differently than you. The answer almost always involves controlled traffic, better drainage, or more inputs.

Once you identify some targets then you can develop a plan to meet everyone's expectations. Jeff Salmond, CSFM at the University of Oklahoma gave a lecture to my class this week about several of his field upgrade projects. He thinks about field construction projects as being from the bottom up (aimed at solving drainage issues), while renovation projects are from the top down (fast establishment for dense grass).

Below are some of the construction, renovation, and management costs that I have used to improve high school football fields in Iowa; costs may be different in your location.

For \$200,000-\$300,000, a 4-6 inch sand pad system with drainage and irrigation can be seeded in the spring and ready for football by September. The drainage is comparable to a USGA-style field but doesn't carry the \$600K to \$800K price tag. It is a great choice for high school fields. It should be able to handle at least 30 activities a year and games can be played during rainy conditions. Because it is sand-based, this field should not be used where traffic levels are sufficiently high enough to break through the grass surface and expose the unstable sand.

For \$70,000-\$100,000 there are various types of sand slit systems where narrow 1-inch bands of sand are trenched on 1-foot centers into existing native soil fields to collect water once it begins to puddle on the field. It is important to achieve a 1inch layer of sand topdressing over the entire field to prevent the sand trenches from closing during soggy conditions. Expect some puddles during heavy rain events but anticipate cutting your rain out time in half.

If they are not looking for a construction project that directly removes water from the field then I go through the following checklist to be sure they are covering all the necessary inputs to maximize turf cover in the high traffic areas of the field (field center and sidelines, 20,000 sq. ft.):

• Automatic irrigation system. Traveling guns (\$3,000-\$6,000) are useful for fields that never wear out, but to force grass growth and reestablishment from seed frequent watering is necessary. If you are putting in a new irrigation system (\$18,000-\$25,000) arrange blocks and heads to complement separate watering of the high traffic areas. If you can't afford an entire system then put a row of heads down the center (\$3,000-\$5,000 not the best choice because heads are in high traffic areas) of the field and you can add the rest of the system when funds become available. If you are installing an entire irrigation system then don't place heads in the center of the field, that's where most of the traffic is; start with heads near the hash marks and then design the rest of the system from there.

• Aerify at least six times a year

with at least three from hollow coring. Seed in conjunction with at least three of the aerifiyings to incorporate seed.

• Most of the field will require 2 to 4 lbs N/1000 sq. ft./yr, but you should be applying 4 to 6 lbs N/1000 sq. ft./yr in the high traffic areas to force growth and maturity of turf.

• Seed at least six times per year in high traffic areas to maximize turf cover. If you are a fan of ryegrass then budget for 600 lbs seed per year (\$750) and if you like Kentucky bluegrass plan on 150 lbs seed per year (\$500). Most likely you will be using a combination of perennial rye and Kentucky bluegrass. The point is to seed heavy and seed often to minimize persistence of bare areas on the field.

• Topdress with sand and in some situations with compost. I suggest that you buy into sand topdressing for at least 3 years with the goal of adding 1.5 tons sand/1000 sq. ft./yr to the entire 65,000 square foot field (approximately 100 tons of sand, \$2,000). Incorporate sand with deep tine aeration (\$1,300) and with your own conventional aeration. If you can't do the entire field then just do the 20,000 sq. ft. high traffic area.

So if they're not happy with the field then ask yourself and your boss if you have been honestly doing all you can to grow grass. If the numbers above don't suit you then just use your own interpretation to this strategy; bury it with sand, bury it with seed, add some fertilizer, poke enough holes often enough to replant anything bare, and keep it wet enough to make everything grow. Most of the fields I visit are using the right practices; they're just not putting enough resources into the important worn out area of the field that exists within the whole field. If your budget has been cut then learn to concentrate your resources by managing the "field within a field".

# PENN STATE | ONLINE



# A leader on—and off—the field

Maximize your career potential in any turfgrass-related field by learning from the leader in online turfgrass education.

Penn State World Campus degrees and certificates are identical to those earned on campus and are taught by the same respected faculty. The convenient online format allows you to balance work and family responsibilities while pursuing the education you need to advance your career.

# **Online Turfgrass Programs**

- Turfgrass Management Certificate
- > Turfgrass Management, Advanced Certificate
- Associate in Science in Turfgrass Science and Management
- Bachelor of Science in Turfgrass Science
- Master of Professional Studies in Turfgrass Management



www.worldcampus.psu.edu/STMA