This leadership profile is intended to provide information about Penn State University and the position of Head, Department of Architectural Engineering. It is designed to assist qualified individuals in assessing their interest in this position.
The Opportunity

The Penn State College of Engineering seeks a highly accomplished scholar and visionary leader to serve as Head of the Department of Architectural Engineering. The new head will lead a department that is regarded as among the nation’s top architectural engineering programs and whose faculty and alumni have made exceptional contributions as innovative scholars, educators and practitioners. The new head will be well positioned to build upon the considerable strengths of the department to further extend Penn State’s impact on the evolution of building design, application and function.

Architectural Engineering (AE) is one of 12 departments and degree programs within the highly-ranked Penn State College of Engineering. Under the leadership of Dean Justin Schwartz, who joined the College in August 2017, the College has outlined a bold vision for the future that emphasizes impact on society and embracing the challenges facing humankind, redefining multidisciplinary activity and engaging globally. Plans include expanding research and graduate education, taking a national leadership role on diversity and inclusion and creating a master plan for buildings and infrastructure. As a member of the College’s leadership team, the head will play a critical role in the realization of the College’s vision and execution of the plan.

Architectural Engineering has a vital role to play in the future where smart cities, smart buildings, energy efficient net zero buildings, designs of indoor environments that promote wellness and productivity, and the science of new materials are in need of visionary engineers to lead the way. The engineers who are creating the future—and training the next generation of innovators—are at Penn State today. The Department of Architectural Engineering offers a range of undergraduate and graduate programs to its more than 350 students. Faculty research and the curriculum focus on four key areas as part of a multidisciplinary approach: structural systems, mechanical systems, construction management and illumination and electrical systems. This multidisciplinary approach includes such processes as Integrated Project Design (IPD) and Construction incorporating advanced modeling tools including Building Information Modeling (BIM). The department is home to 19 tenure-track faculty members, 13 practitioner instructors and 12 staff. The department’s graduates are in exceedingly high demand and achieve 100 percent employment at graduation. More information about the department can be found at: www.ae.psu.edu.

Penn State is a public, land-grant, research-intensive university with campuses and facilities throughout Pennsylvania. Founded in 1855, the university has a threefold mission of teaching, research, and public service. Its instructional mission includes undergraduate, graduate, professional and continuing education offered through resident instruction and online delivery. Annual enrollment at its 24 campuses totals more than 100,000 graduate and undergraduate students, making it one of the largest universities in the United States.
Reporting to the Dean, the head is responsible for visioning, strategic planning, operations, finances, academic affairs, external relations and advancement. The successful candidate will be committed to enhancing the department’s education, research, and service missions and will possess the scholarly record, leadership skills, and strategic capacity to advance the department. Additional essential qualifications include successful administrative experience in a university, industry, or government environment, the ability to effectively engage a broad range of internal and external constituencies, and a commitment to equity and inclusion. The successful candidate will have the credentials to receive tenure as a full professor in the College.

For more information on how to apply, please refer to the “Procedure for Candidacy” section toward the end of this document.

The Role of the Head, Department of Architectural Engineering

Reporting to the Dean of the College, the head is the chief academic and administrative officer of the department, overseeing all aspects of the department, serving as its chief spokesperson and fundraiser. The head sits on the College’s senior leadership team and works closely with College administration, other schools and colleges, and a variety of offices across campus. The head provides leadership for faculty, staff and students in establishing and achieving the department’s strategic goals and inspiring its future.

These responsibilities include but are not limited to:

- Inspiring an expansive vision for a world-class department within a leading university, as well as a commitment to excellence in research and teaching;

- Lead the faculty in developing appropriate emphasis on undergraduate and graduate education, while considering strategic alignment with college and university priorities;

- Building a holistic research program and forward looking agenda for the department and growing the graduate program;

- Providing outstanding leadership and administrative acumen — including ability to lead complex finances and budgetary strategies, handle sensitive personnel matters, and provide effective management of an administrative team — in an environment of shared governance;

- Serving as a strong fundraiser, actively engaging donors and volunteers, providing intentional and active leadership to department development initiatives, and working collaboratively with College leadership to maximize philanthropy;

- Advocating for the department within the College and across the university, procuring resources and ensuring the accomplishments of the department and its faculty and students are promoted across campus;
• Interact with architectural engineering and architect professionals;

• Communicating compellingly and working effectively and collegially with individuals on and off campus;

• Acting innovatively and entrepreneurially while building consensus for new initiatives and ideas;

• Developing a positive, collegial, equitable and inclusive environment;

• Appreciating and respecting the various missions of the College’s disciplines and programs while supporting the vision and common goals for its future.

The head leads a team of 32 faculty and staff. The following positions report to the Head:

• Department Head Assistant
• Lab Technologist/Manager
• Office Manager
• Bookkeeper
• Undergraduate Programs Officer

• Graduate Programs Officer
• Computer and Network System Administrator
• Communications strategist

Details about the College’s overall budget can be found at: [2016-17 Operating Budget Engineering - General Funds](#).
Opportunities and Expectations for Leadership

The new head will have an exceptional opportunity to help shape and influence architectural engineering research and education at one of the top engineering programs in the country. The Head’s overarching challenge will be to provide strategic, intellectual, and administrative leadership to the department. Among the immediate opportunities and goals for the new Head are the following:

**Lead and unify the department around a strategic vision for the future**

As the visionary leader for the Department of Architectural Engineering, the head will engage faculty, staff, students, alumni, and the corporate community in a collaborative dialogue and process, focused on creating a clear vision, identifying areas for potential growth and setting priorities to guide the department’s future, while leveraging the unique resources of the College and University.

The head must be committed to a vision of architectural engineering as a truly multidisciplinary enterprise where information technology, human factor studies, integrated systems and design, distributed energy, disaster resiliency, and sustainability are at the forefront. There is an emphasis on integrated systems and designs to benefit the building as a whole. The head must understand where the industry is headed, in the broadest and most visionary sense, and ensure the department is aligned with that future. Realizing this approach will require leadership to bring together the four main areas within AE - construction, lighting/electrical systems, mechanical systems and structural systems - in a highly collaborative and integrated fashion. Likewise, it will require the head to communicate about and advocate for the program within the College and broader university to enhance the understanding of architectural engineering and its interdisciplinary vision and approach and develop bridges for greater cross-departmental collaborations within the College and cross-program collaborations across the university.

**Serve as a member of the College’s leadership team and contribute to its excellence**

The College is undergoing tremendous revitalization under the leadership of its new dean, Justin Schwartz, who is outlining a bold vision for the future of the College focused on leading the national engineering community through a humanity-focused approach, redefining multidisciplinary activity, and engaging globally to solve societal problems. A number of exciting priorities emerging from this vision include the expansion of research and graduate education; leadership around diversity, inclusion and climate; a college master plan for buildings and infrastructure; and re-branding the College around engineering humanity. As a member of the
College's leadership team, the head will be expected to advocate for the department within the context of what is in the best interest in the College and the University and to ensure that department priorities and goals are aligned with College and University priorities and goals. The head will be expected to embrace and support these campus-wide priorities and work to enable their realization through the decisions and activities of the department. The head will have a critical voice in the future of the College. (For more information on Dean Schwartz's vision and plan, see: Penn State College of Engineering Town Hall - October 2017.)

**Champion and ensure an environment of equity and inclusion**

Penn State and the College of Engineering are committed to equity and inclusion for all faculty, staff and students. Dean Schwartz has made the creation of a more equitable and inclusive environment—and leadership in this arena among engineering schools nationally—one of the highest priorities. Key goals are to achieve gender equity in undergraduate programs in six years and increase diversity among faculty, staff and students, among others. The next head must inspire and motivate staff at all levels around a vision for a more equitable and inclusive community while also recruiting and retaining a diverse and talented faculty, staff and student body. Given the many demographic and societal changes taking place nationally and internationally, the next head must also be attentive and sensitive to ensuring an organizational culture of openness, fairness and transparency that celebrates a diversity of thought and expression and that promotes an environment of inclusion. The new head must lend personal authority and passion to these efforts and ensure strong and consistent communications and collaborations across the department and beyond.

**Successfully address key issues facing the department**

The department is facing a number of important and interrelated issues around facilities, enrollment and curriculum that must be the focus of considerable attention for the new head.

At its peak, approximately 120 new students were entering the AE program each year. Due to a variety of factors, there are now approximately 80 new students per year. The new head must be prepared to address the challenges of enrollment with vision and new ideas as well as the diplomacy and leadership to make the necessary decisions to turn that tide. As one of the leading AE departments in the country, the AE program is in the enviable position of having 100 percent employment of its graduates who are highly sought after by industry after graduation; the demand is clearly there for Penn State AE graduates.

Complicating the enrollment situation are dynamics around facilities and curriculum. Current AE facilities are in need of major attention. They are outdated and lacking in the modern spaces,
equipment and amenities representative of the most highly competitive programs which attract the attention of the most competitive students, faculty and staff. The College is fully prepared to address these concerns as part of its new master building and infrastructure plan of which AE is a leading priority. The new head will be expected to work with Dean Schwartz and the entire leadership team to forge and execute a facilities plan that will address the most pressing problems and improve research, instructional, administrative and community spaces for AE students, faculty and staff.

**Promote and grow research and graduate education**

The AE department has a strong record of research funding. The head is expected to set the vision and expectation and lead the department toward higher levels of research excellence and productivity to grow the breadth, depth, and strength of its research portfolio. The emphasis must be on smart growth with a focus on leadership on integrated interdisciplinary research grants, including cross-department and cross-college proposals, and diversifying funding sources. The head will ensure strong support of faculty in their pursuit of research funding from a variety of sources including government and private sources.

In tandem with the emphasis on growth of research must come growth in graduate enrollment. The head will be expected to grow and expand support for graduate students and increase the number of master's and doctoral degrees awarded.

**Cultivate and further strengthen relationships with industry and alumni**

One of the AE program's greatest assets is its deep and significant ties to civil, mechanical, environmental and architectural engineering and building industries, including manufacturers of advanced materials and devices. To this end, the department has established the Industrial Professional Advisory Committee. The head will actively engage this committee and ensure its continued vibrancy as a vital resource to the program.

Each year the department hosts the AE Career Day for students. This past year, 130 companies participated in career day with a waiting list of another 100 companies, due in part to the department’s strong alumni network. Graduates enjoy 100 percent employment after graduation among some of the industry's most prominent companies. The new department head will be expected to invest considerable time and energy to cultivate and strengthen these relationships and identify and grow opportunities for enhanced partnerships—for funding, research projects, student internships, and guest lecturers, among others—to enrich the research and learning environment and further strengthen the mutually beneficial synergies that exist between the university and industry.

**Advocate for the department, enhance its visibility and promote its quality and impact**

The next head will be an energetic and vocal advocate who will work to enhance the visibility of the department, both internally and externally. The head will be able to articulate the department's distinctions and strengths and will seek avenues to promote the quality and impact of the department's programs, faculty, students, and staff. These endeavors will create
greater pride across the department and College as well as attract the attention of prospective students, faculty, partners, and funders.

In order to ensure that the department is a recognized leader in providing the most qualified graduates for careers in industry, the head will be the advocate and chief spokesperson for the College. Finding new and exciting ways to capture the attention of internal and external audiences and stakeholders is critical.

**Manage and grow the financial resources of the department**

The head will manage resources strategically, fairly, and effectively and seek out and generate new and diversified resources. This will include developing and recommending the department’s annual budget, facilitating grant-writing and external funding proposals, managing resource acquisition and allocation, and managing facilities and infrastructure to support department, College and University goals for teaching and research activities.

Working closely with the College’s leadership, a successful head will effectively coordinate with others engaged in corporate and individual donor relations across the College and University. The head will be responsible for significantly enhancing, guiding and supporting all fundraising efforts on behalf of the department, including development of fundraising and communications strategies as they relate to cultivation, solicitation, and stewardship of donors. The head will provide leadership in sustaining and obtaining additional resources from alumni, donors and corporate partners.
Qualities and Qualifications

The Penn State College of Engineering seeks a Head for its Department of Architectural Engineering who possesses broad intellectual insights, top-tier scholarly credentials, and the leadership and managerial capacity to actualize a compelling vision for its future. The successful candidate will bring the following background, skills, and qualities:

Professional Qualifications and Credentials

An earned doctorate degree in architectural engineering or related engineering discipline; (e.g., mechanical, electrical, civil, or construction engineering);

- Professional registration (e.g., PE, PEng, Chartered Engineer in a discipline related to Architectural Engineering);

- Strong academic stature; a record of scholarly achievement in engineering;

- Experience in developing and pursuing a strategic vision in an academic setting or a similar context; success as a change agent;

- Administrative experience gained within an academic, professional, organizational, industrial, or governmental context;

- A record of sponsored research; deep knowledge of the internal and external mechanisms required to sustain and expand a top-tier research program;

- A record that demonstrates a commitment to and passion for undergraduate and graduate education;

- An enthusiasm for fundraising: ability to forge new opportunities for industry partnerships, sponsored research, and alumni donations.

Personal Qualities and Skills

- Strategic capacity: the ability to envision, create, and capitalize on novel opportunities for the department and to inspire key constituencies to achieve the department’s vision;

- A commitment to interdisciplinary work: the wide-ranging intellectual interests to appreciate and support the varied work in the department and the many engineering-intensive activities across Penn State;

- A personal commitment to and record of success in advancing an environment of equity and inclusion;

- Intellectual heft to build strong relationships with faculty and personal qualities needed to connect with, engage, and mentor them;
• Outstanding communication skills: able to articulate a vision, inspire others, attract partners, and generate enthusiasm with varied constituencies;

• Strong interpersonal skills: the ability to connect with the members of the AE community and to work effectively across the campus and with external groups;

• An entrepreneurial spirit: the mindset and personality to stimulate growth and change;

• Integrity and the highest standards of ethical behavior.

Appointment

The head position is a full-time, 12-month administrative appointment accompanied by a full-time, tenured Professor appointment with full university benefits. The head reports to the Dean. The anticipated start date for this position is July 1, 2018 or as soon thereafter as possible.

College of Engineering Overview

With a firm grounding in fundamentals, Penn State Engineering embraces multidisciplinary and interdisciplinary education and research, and integrates component solutions into a systems perspective. With 12 departments and schools offering undergraduate degrees in a broad spectrum of engineering disciplines and computer science, and with more than 30 research centers and laboratories, Penn State Engineering is one of the nation’s leading academies of learning, discovery, and application. The College’s work is intertwined with industry, both at its doorstep in Pennsylvania and further afield, thus affording its students unparalleled training and employment opportunities. For more information about the College of Engineering see: www.engr.psu.edu.

College Highlights

• 23 new faculty hired for 2016-17
• 24 percent of first-year students entering University Park for Summer and Fall 2017 are women
• Two major building projects are underway:
  o State-of-the-art Chemical and Biomedical Engineering building (194,000 sq. ft.)
  o Expanded Agricultural and Biological Engineering building (adding 35,000 sq. ft.)

Academic Units

• Acoustics
• Aerospace Engineering
• Agricultural and Biological Engineering
• Architectural Engineering
• Biomedical Engineering
• Chemical Engineering
• Civil and Environmental Engineering
• School of Electrical Engineering and Computer Science
• Engineering Science and Mechanics
• Industrial and Manufacturing Engineering
• Mechanical and Nuclear Engineering
• Engineering Design, Technology, and Professional Programs

College of Engineering Institutes

• Engineering Energy and Environmental Institute
• Facilities Engineering Institute
• Institute for Natural Gas Research
• Larson Pennsylvania Transportation Institute

Centers and Labs

• Battery & Energy Storage Technology (BEST) Center
• Center for Engineering Design and Entrepreneurship
• Center for e-Design
• Center for Combustion, Power, and Propulsion
• Center for Health Organization Transformation
• Center for Neural Engineering
• CIMP-3D
• Electrochemical Engine Center
• Indoor Environment Center
• Protective Technology Center

University-Wide Institutes

• Applied Research Laboratory
• Battery and Energy Storage Technology (BEST) Center
• Huck Institutes of the Life Sciences
• Institute for CyberScience
• Materials Research Institute
• Penn State Institutes of Energy and the Environment
• Radiation Science and Engineering Research Center
• Sustainability Institute
Enrollment: Fall 2017

Undergraduate: 11,482 total (8,183 at University Park; 3,299 at the other campuses)
Graduate: 1,618 total (1,450 at University Park—912 PhD, 592 Master's); 168 at the other campuses (all Master's)

Degrees Awarded in 2015-16 at University Park

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<td>Master</td>
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Faculty

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<tr>
<td>Post-doc</td>
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<td>Fellow</td>
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</tbody>
</table>

Expenditures: $232 Million Total

Research: $128 million
General Funds: $86 million
Endowment/Gifts: $18 million
Department of Architectural Engineering Overview

The mission of the Department of Architectural Engineering is to advance the built environment through the development of world-class architectural engineers and innovative research. The department achieves this mission by bringing together construction, lighting/electrical, mechanical and structural engineering in a curriculum and research program focused on the design construction, operation and analysis of buildings. For more information see: www.ae.psu.edu.

Department Facts

- Enrollment (Fall 2016): 179 BAE, 77 BAE/MAE, 6 M.Eng., 16 MS, 32 PhD
- 40 percent of undergraduate students study abroad in China or Rome, Italy
- 135 companies participate in the annual AE Career Fair
- 100 percent of students seeking employment in the build industry achieve job placement by spring graduation
- Faculty: 7 professors, 9 associate professors, 3 assistant professors, 13 practitioner instructors

Degree Programs

The department offers the following minors and degrees:

- Residential Construction minor
- Bachelor of Architectural Engineering (BAE)
- Integrated Bachelor and Master of Architectural Engineering (BAE/MAE)
- Integrated Bachelor and Master of Science in Architectural Engineering (BAE/MS)
- Master of Engineering in Architectural Engineering (M.Eng.)
- Master of Engineering in Facilities Engineering and Management (M. Eng.)
- Master of Science in Architectural Engineering (MS)
- Doctor of Philosophy in Architectural Engineering (PhD)

Four options are available for architectural engineering students to specialize in during the last two years of their five-year undergraduate degree program.

Construction Option

Students in the construction option are prepared to take an active role in the planning, management, design, and construction phases of building projects.

Construction students focus on management techniques and economic considerations associated with construction of a full range of building projects. Students prepare for an active role in construction planning and implementation through courses on contracting, scheduling, estimating and construction methods.
Lighting/Electrical Option

Students in the lighting and electrical option have the skills and knowledge necessary to create high-quality lighting systems and safe and effective electrical distribution systems.

The lighting and electrical option builds on the fundamentals of electrical circuits, power distribution and illumination systems for buildings. Strong design and analysis capabilities are developed through a number of courses.

Mechanical Option

Students in the mechanical option work to combine a strong background in building systems with mechanical engineering fundamentals to design systems that provide quality environments for people.

All mechanical option students have completed in-depth course work in heating, ventilation, and air-conditioning (HVAC) fundamentals, analysis, and design. They focus on the design of total building systems. Additional courses available include indoor air quality, building solar design, HVAC noise control and acoustic design, and advanced building electrical systems design.

Structural Option

Students in the structural option specialize in designing buildings that successfully integrate structure, environmental systems, and architecture. They consider the building and its construction as a whole and incorporate this into their designs.

All structural engineering students begin with a background in statistics, dynamics, materials, design, and analysis techniques. Additional courses include geotechnical and foundation engineering, surveying, and advanced concrete and steel design.

Research Labs and Facilities

- Bioaerosols Laboratory
- Building Components and Envelopes Research Laboratory
- Building Structures Laboratory
- Computer-Aided Design Laboratory
- Immersive Construction Laboratory
- Environmental Chamber
- Illumination Laboratory
• Intelligent Systems Laboratory
• MorningStar Solar Home
• Penn State at The Navy Yard

Centers, Initiatives, and Organizations

• American Indian Housing Initiative
• Center for High Performance Building Systems
• Computer Integrated Construction Research Program
• Engineering Energy & Environmental Institute
• Indoor Environment Center
• Lean and Green Research Initiative
• Partnership for Achieving Construction Excellence
• Pennsylvania Housing Research Center
• Project CANDLE

Research Areas

• Building Construction Engineering and Management
• Building Illumination Systems
• Building Mechanical Systems
• Building Structural Systems
• Interdisciplinary Systems
Procedure for Candidacy

Nominations, expressions of interest, and applications (CV, letter of interest and contact information for five professional references) should be sent via email to the University’s consultants, Suzanne Teer and Brian Bloomfield, at PennStateHeadAE@wittkieffer.com.

Review of applications will continue until the position is filled. To receive full consideration, applications should be received by February 2, 2018. References will not be contacted without prior knowledge of and approval by the candidate. It is expected that the Head, Department of Architectural Engineering will be appointed by late April 2018.

The University is committed to equal access to programs, facilities, admission and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University’s educational mission, and will not be tolerated.

Please note that final candidates for the position will be required to complete a background check process based on the requirements of the position including child abuse and criminal history checks.

The material presented in this leadership profile should be relied on for informational purposes only. This material has been copied, compiled, or quoted in part from Penn State documents and personal interviews and is believed to be reliable. While every effort has been made to ensure the accuracy of this information, the original source documents and factual situations govern.
Appendix I: Penn State University

Mission:
“Penn State is a multi-campus public research university that educates students from Pennsylvania, the nation and the world, and improves the well being and health of individuals and communities through integrated programs of teaching, research and service.”

Twenty-four campuses; 17,000 faculty and staff; 100,000 students; a teaching hospital that provides care to more than a million patients a year; over one-half million active alumni; an online World Campus that empowers anyone to pursue an education - anytime, anywhere; and the largest student-run philanthropic organization on the plant

That’s what makes Penn State... Penn State.

Inspiration meets perspiration... here. Head meets heart... here. On our campuses, across our country, around the world.

As Pennsylvania's only land-grant university, Penn State has a broad mission of teaching, research, and public service. But that mission was not so grandly conceived in 1855, when the Commonwealth chartered it as one of the nation's first colleges of agricultural science, with a goal to apply scientific principles to farming.

Centre County became the site of the new college in response to a gift of 200 acres from gentleman farmer and ironmaster James Irvin of Bellefonte. Founding President Evan Pugh drew on the scientific education he had received in Europe to plan a curriculum that combined theoretical studies with practical applications.

Pugh and similar visionaries in other states championed Congressional passage of the Morrill Land-Grant Act in 1862. The act enabled states to sell federal land, invest the proceeds, and use the income to support colleges “where the leading object shall be, without excluding scientific and classical studies ... to teach agriculture and the mechanic arts [engineering] ... in order to promote the liberal and practical education of the industrial classes in all the pursuits and professions of life.” The state legislature designated Penn State the land-grant institution of Pennsylvania.

But not until the 1880s, under the leadership of President George W. Atherton, did the College expand its curriculum to match the Land-Grant Act's broad mandate. From that time onward, curriculums in engineering, the sciences, the liberal arts and more, began to flourish. In the early 1900s, Penn State introduced cooperative extension and additional outreach programming, extending the reach of its academic mission.
An even greater segment of the Commonwealth's population had opportunities for engagement in the 1930s when Penn State established a series of undergraduate branch campuses, primarily to meet the needs of students who were location-bound during the Great Depression. Those campuses were predecessors of today's system of 24 Penn State campuses located throughout the Commonwealth.

Penn State began offering systematic advanced-degree work in 1922 with the formation of the Graduate School. Graduate education and research evolved hand in hand. By 1950, the university had won international distinction for investigations in dairy science, building insulation, diesel engines, acoustics, and other specialized fields.

A college of medicine and teaching hospital was established in 1967 with a $50 million gift from the charitable trusts of renowned chocolate magnate Milton S. Hershey. In 1989, the Pennsylvania College of Technology in Williamsport became an affiliate of the university. In 2000, Penn State and the Dickinson School of Law merged. In 2015, two Penn State law schools known as Dickinson Law (in Carlisle, Pennsylvania) and Penn State Law (on University Park campus) were in operation. Penn State's online World Campus graduated its first students in 2000 and now enrolls more than 12,000.

For more information: [http://www.psu.edu/this-is-penn-state](http://www.psu.edu/this-is-penn-state)
Appendix II: College of Engineering Leadership

Justin Schwartz, PhD
Harold and Inge Marcus Dean of Engineering

Dean Schwartz received a B.S. with Highest Honors from the University of Illinois at Urbana-Champaign and a Ph.D. from the Massachusetts Institute of Technology.

After serving as one of the first Science and Technology Agency of Japan Fellows at the National Research Institute for Metals, Japan, he joined the University of Illinois at Urbana-Champaign as an Assistant Professor.

In 1993, Dean Schwartz joined the newly-formed National High Magnetic Field Laboratory and the Department of Mechanical Engineering at Florida State University, where he served as the Leader of the HTS Magnets and Materials Group. In 2003, his research group, in collaboration with Oxford Instruments, established the world record for magnetic field generation by a superconducting material.

In 2009, he joined North Carolina State University as the Kobe Steel Distinguished Professor and Head of the Department of Materials Science and Engineering. In this role he led the rapid expansion of his department, guiding them upwards in the national rankings from 31st to 15th, while more than doubling the research portfolio and endowment.

He joined Penn State as the Harold and Inge Marcus Dean of Engineering and Professor of Engineering Science and Mechanics in August 2017.

Dean Schwartz's research interests include superconducting, magnetic and multiferroic materials and the systems they enable. He has published more than 240 peer-reviewed journal articles and has graduated 44 Ph.D. and M.S. students in six academic disciplines, including fifteen female, six under-represented minorities.

Dean Schwartz is a Fellow of the IEEE, AAAS, and ASM.
Appendix III: Search Committee

**Tom La Porta**  -  Search Chair  
EECS Head

**Somayeh Asadi**  
AE Assistant Professor

**William Bahnfleth**  
AE Professor

**Rachel Coyle**  
AE UG Student

**Hope Furrer**  
AE Alumnus

**Kevin Houser**  
AE Professor

**Moses Ling**  
AE Associate Professor

**Rick Mistrick**  
AE Associate Professor

**Esther Obonyo**  
AE/SEDTAPP Associate Professor

**Kevin Parfitt**  
AE Interim Department Head

**Ute Poerschke**  
Professor of Architecture

**Holly Seidel**  
AE Administrative Support Coordinator

**William Sitzabee**  
Associate VP for Facilities Management and Planning

**Erik Sohn**  
AE Grad Student/FEI

**Michelle Vigeant**  
AE/Acoustics Assistant Professor

**Gordon Warn**  
CEE Associate Professor
Appendix IV: In the Community

We strive to be great neighbors. We generate billions of dollars for the state economy and serve communities at the grassroots level.

**ECONOMIC IMPACT** With 24 campuses throughout Pennsylvania, Penn State represents a strong economic engine. It is, among other things, a major employer and a source of students, faculty, and staff who keep local economies going by spending money to live in communities and support nonprofits to benefit those in need.

Statewide, Penn State’s research and development expenditures have increased steadily over the past decade, contributing to the economy through innovation and technology transfer. Federal dollars coming our way for research and development have increased substantially over the past 10 years. Likewise, industry-sponsored research continues to trend upward.

**INVENT PENN STATE** At Penn State, we recognize that great minds need support. Invent Penn State is a Commonwealth-wide set of initiatives and investments that will drive economic development, a culture of entrepreneurship, and student career success. Our aim is to accelerate the transfer of new ideas into useful products and build a stronger entrepreneurial ecosystem around our campuses.

**SERVICE** Across the University, colleges and campuses engage in community service projects, from giving advice to working side-by-side with people on projects. Penn State’s Department of Agricultural Economics, Sociology, and Education are just one example of how seriously Penn State takes its mission of serving communities. Among the research centers in that department alone: Pennsylvania Women’s Agricultural Network; Operation: Military Kids; Consumer Services Information System; and Childcare and Youth Training and Technical Assistance Program.

**PENN STATE EXTENSION** Penn State Extension is an educational network that gives people in Pennsylvania’s 67 counties access to the University’s resources and expertise. We offer practical how-to education and problem-solving assistance based on University research. We strive to help people make informed decisions to improve their lives, businesses, and communities.
Appendix V: Pennsylvania State University Rankings

For more than 150 years, Penn State has been a leader in higher education, as shown by rankings from those who monitor academe from the outside. Here are a few examples of recent rankings, primarily relating the University’s academic standing.

**U.S. News & World Report, America’s Best Graduate Schools 2018**

**Business:**
- Smeal College of Business overall 36
- Supply Chain/Logistics, #6

**Education:**
- College of Education overall tied for #38
- Vocational/Technical Education, #2
- Higher Education Administration, #6
- Administration and Supervision, #9
- Educational Policy, #10

**Engineering:**
- College of Engineering overall tied for #32
- Petroleum Engineering, #6
- Industrial/Manufacturing/Systems Engineering, tied for #8
- Nuclear Engineering, #8
- Biological/Agricultural Engineering, #9

**Health Disciplines (ranked in 2016):**
- Clinical Psychology (doctorate), tied for #18
- Health Care Management (master's/doctorate), tied for #27
- Rehabilitation Counseling (master's/doctorate), tied for #6
- Speech-Language Pathology (master's), tied for #21

**Law:**
- Penn State Dickinson Law overall tied for #65
- Penn State Law overall tied for #82

**Nursing:**
- College of Nursing overall tied for #20

**Social Sciences and Humanities:**
- Developmental Psychology, tied for #5
- Sociology of Population, #7
- Sociology, #17
- Economics, tied for #25
- Political Science, tied for #33
- English, tied for #27
- Psychology, tied for #26

**Sciences (ranked in 2015):**
- Geology, tied for #1
- Environmental Sciences, tied for #2
- Geochemistry, #2
- Earth Sciences, #6
- Paleontology, #8
- Cosmology/Relativity/Gravity, #10
- Statistics, tied for #20
- Chemistry, tied for #21
- Physics, tied for #23
- Mathematics, tied for #28
- Computer Science, tied for #29
- Biological Sciences, tied for #42

**U.S. News 2017 Best Online Program Rankings**

Penn State is ranked No. 8 (tied) for the best online bachelor’s programs in the country in U.S. News & World Report’s 2017 “Best Online Programs.” Individual programs ranked include:

- #4 for best online graduate engineering programs
- #5 for best online graduate information technology programs
- #7 (tied) for best online graduate business programs excluding MBA
- #8 for best online MBA programs
- #9 for best online graduate education programs
National Science Foundation

In the most recent institutional rankings released by the National Science Foundation of total research expenditures for science and engineering, Penn State stands second in the nation in the number of fields in which it is ranked in the top ten. (For FY2013; released February 2015)

Overall: 17
Industry: 27

Overall Engineering: 5
  Aero/Astro-Engineering: 8
  Chemical Engineering: 19
  Civil Engineering: 9
  Electrical Engineering: 4
  Materials Engineering: 1
  Mechanical Engineering: 3

Overall Environmental Sciences: 14
  Atmospheric: 9
  Earth Sciences: 9

Overall Physical Sciences: 21
  Chemistry: 26
  Physics: 17
  Astronomy: 15

Overall Social Science: 14
  Political Science: 28
  Sociology: 3

Penn State is ranked among the top 100 universities in the world, at 77th, by the Times Higher Education World University Rankings. (9/2017)

Penn State Hershey Children's Hospital has been ranked among the top 50 U.S. hospitals in six specialties—cancer, cardiology and heart surgery, neonatology, and orthopedics—in U.S. News & World Report's 2017-18 Best Children's Hospitals rankings.

Penn State ranks 7th among "flagship" schools whose recent graduates earn the highest median starting salaries. (2013)

Forbes named Penn State as one of the 100 Best Values Public Colleges and Best Value College. Penn State's ranking is 31 among public colleges and 95 among all colleges. (3/2016)

DesignIntelligence 2017 ranks Penn State's Landscape Architecture program No. 2 in the U.S., with its graduate program ranking 10th. In addition, Penn State's Architecture program ranks for the ninth straight year in the Top 20 of approximately 120 NAAB accredited programs in the nation.

Penn State is ranked at No. 58 for 2017 in the Center for World University Rankings. The list includes national and international schools. Criteria for the rankings are: quality of faculty, publications in top journals, highly influential research, citations, patents, academic training of students, and professional future of alumni.

For a comprehensive listing of rankings visit: http://www.psu.edu/this-is-penn-state/rankings
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