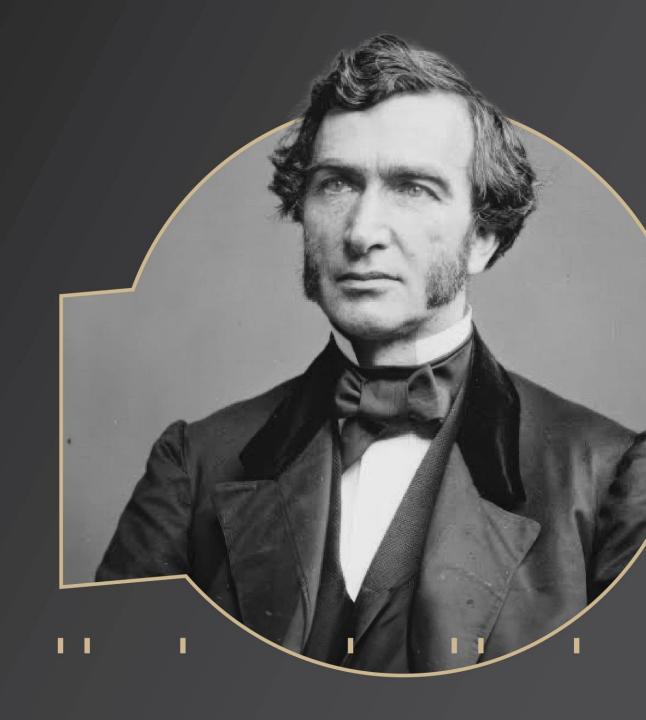
#### Morrill Land Grant College Act passes

"...maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts..."

- Justin Morrill





William B. Morgan becomes the first Professor of Engineering

WILLIAM B. MORGAN,

Professor of Mathematics and Engineering.

#### FACULTY OF THE UNIVERSITY.

PRESIDENT,

ABRAHAM C. SHORTRIDGE.

Moral Science and Psychology.

PROFESSORS,\*

JOHN S. HOUGHAM.

Professor of Physics.

JOHN HUSSEY.

Professor of Bonny and Hortfeulture.

WILLIAM P. MORGAN.

orelsor of Mathematics and Engineering

HARVEY W. WILEY

Destroyer of Ch.

ELI F. BROWN,

Professor of English Literature and Brawing,

MRS. SARAH A. OREN.

Assistant Professor of Mathematics.

Professor of French and German Languages,

L. A. BURKE,

Superintendent of Farm.

H. C. HENDRICKSON,

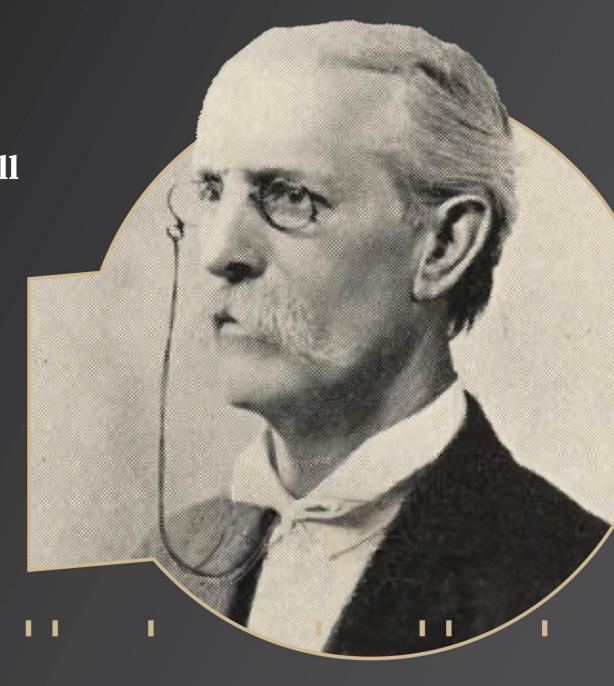
Stoward

"The Professors' names are arranged in the order of aguicalty of appointment-#To be supplied.

President Shortridge announced a full four-year curriculum on November 1

"Students in Surveying and Civil Engineering will be required to be proficient in the use of engineering instruments in turning out ideal railroad lines, laying out curves, determining the amounts of excavation and embankment, drafting bridges, calculating materials and costs, and writing specifications."

- University President Abraham Shortridge



## Emerson White is named President of Purdue University

President Emerson followed the Morrill Act and focused the university on engineering and agriculture. He launched Purdue's first four-year program, the School of Mechanical Engineering.



### William Eldridge became the first engineering graduate

That one student, who entered Purdue Engineering 150 years ago and graduated 147 years ago, led to more than 4,000 graduating engineers in 2024. 1877.

BACHELORS OF SCIENCE.

Franklin Pierce Clark. William King Eldridge.

1878.

BACHELORS OF SCIENCE.

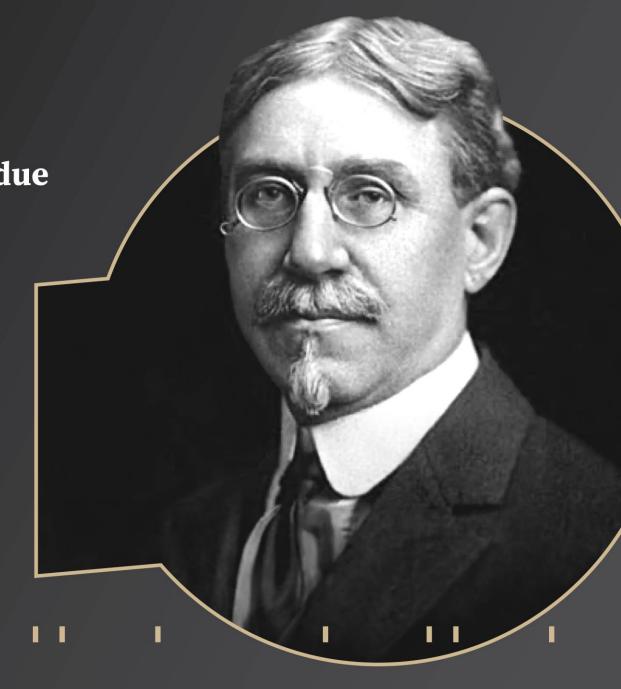
Jesse Harvey Blair.
Eulora Miller.
Daniel William Noble.
John Crothers Van Natta.

CIVIL ENGINEER.

William King Eldridge, B. S., '77.

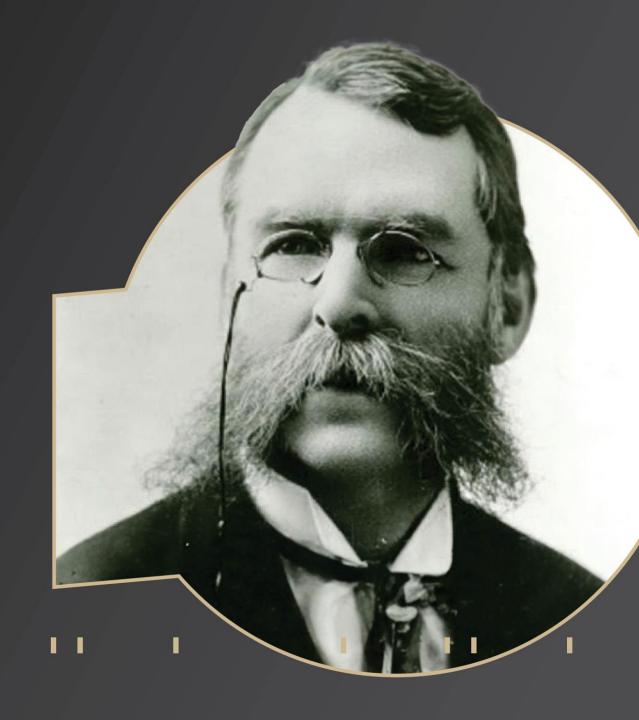
W. F. M. Goss is hired to lead the Purdue School of Mechanics

In 1882 he developed a full course of studies for Mechanical Engineering. It became Purdue's first continuous engineering school. Goss became Purdue's first Dean of Engineering in 1900 and stayed with the university until 1907.



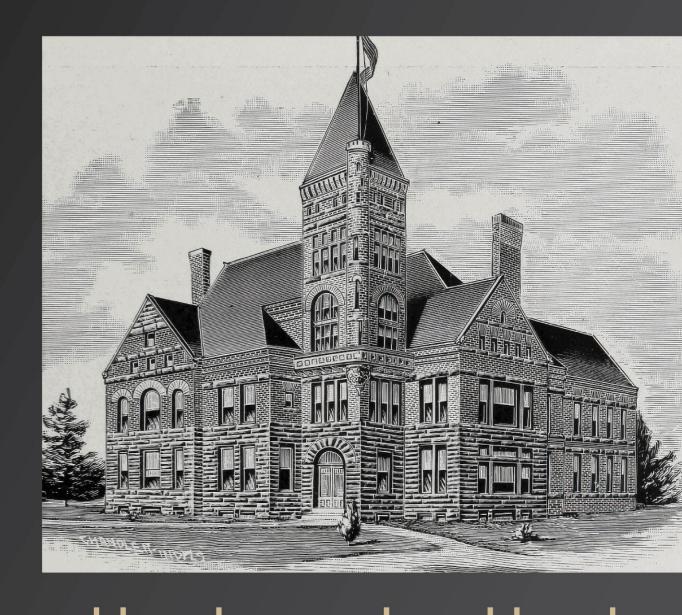
#### James Smart is named President of Purdue University

Smart served as Purdue President from 1883 until his death in January of 1900. Smart and W. F. M. Goss guided Purdue engineering into leadership at the start of the 20th century.



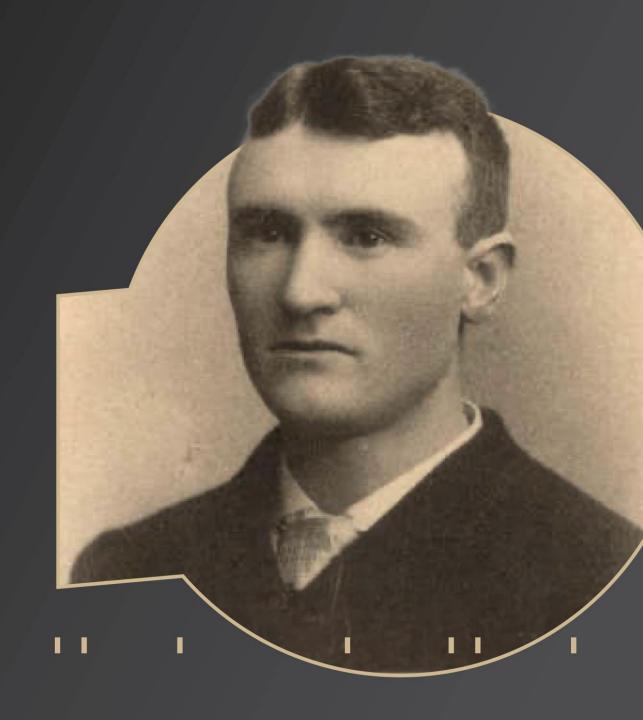
School of Electrical Engineering formed with concentrations in power generation and distribution

The first EE building was among early facilities on campus and was located opposite of Stanley Coulter Hall on site of the current Chemistry building. Railroad tracks came alongside the building to provide a berth for the Purdue University Interurban Test Car.



### Michael Golden begins teaching practical mechanics

W. F. M. Goss hired him in 1890 and he retired in 1916. He made spare cash as a boxer and used that money to attend MIT. He could be arbitrary and threatening: "I'll flunk you if I can, and I can if I want to." Students first feared and later loved him. In 1920, the Popular Mechanics Building was named for him.



#### Reginald Fessenden rises to Head of Electrical Engineering

He was absent-minded. He walked into classrooms and began his lecture, only to be told he was in the wrong room. He left Purdue in 1893, became "Father of Radio," the first person to transmit a human voice without wires. He received hundreds of patents in his life, including some for a device called "television."



David Ross graduated from Purdue Engineering and became an early success story

He became a very successful businessman, starting four companies and holding 88 patents. He was named to the Board of Trustees in 1921 and became president in 1927, serving until his death. He donated more than \$1.6 million, created Purdue Research Foundation, Ross-Ade Stadium, Purdue Airport, much more.



The crown jewel of Purdue, Heavilon Hall, is dedicated in a large celebration

In 1892, Amos Heavilon of Frankfort donated \$35,000 to Purdue. Heavilon's \$35,000 was combined with \$50,000 from the state to build Heavilon Hall, which received national attention and was called the "best engineering building in west."



Three days later, explosions in a boiler destroy Heavilon Hall

The morning after the fire, President Smart addresses the students in chapel:

"We are looking this morning to the future, not the past...I tell you, young men, that tower shall go up one brick higher."

One brick higher became a mantra for Purdue and Heavilon Hall was rebuilt.

David Robert Lewis became the first African American Purdue Engineering graduate

His civil engineering senior thesis at Purdue was titled "Highway Road Construction" and included a review of European road building techniques. Lewis was among the nation's first black engineers. He taught mechanical drawing at Virginia's Hampton Institute.



## The second Heavilon Hall is completed

It was nine bricks higher and included a clock and bells. However, it was taken down in 1956. Today, the bells are in our Bell Tower by Hovde Hall. The clock still works and is in the Gatewood Wing of the Mechanical Engineering Building.

A third Heavilon Hall was built in 1959—the one that is on campus today.



Celebrated athlete Ray Ewry earned a Purdue master's degree in engineering

He had previously graduated in 1894 with a bachelor's degree in mechanical engineering and participated on the track team. His fame began in 1900 when he won three gold medals at the Paris Olympic Games. He won seven more golds in subsequent games for a total of 10. His events were the standing triple jump, the standing long jump, and the standing high jump.



Martha Dick Stevens is the first woman to earn a Purdue Engineering degree

Stevens graduated with a bachelor of science degree in 1894 in mathematics and biology, a bachelor of science degree in civil engineering in 1897, and a master of science degree in 1898. She then took non-degree study in French and industrial arts until 1902. After Purdue, Stevens spent a year as a Presbyterian missionary in Flag Pond, Tenn., then taught college mathematics before retiring to care for her aging parents.



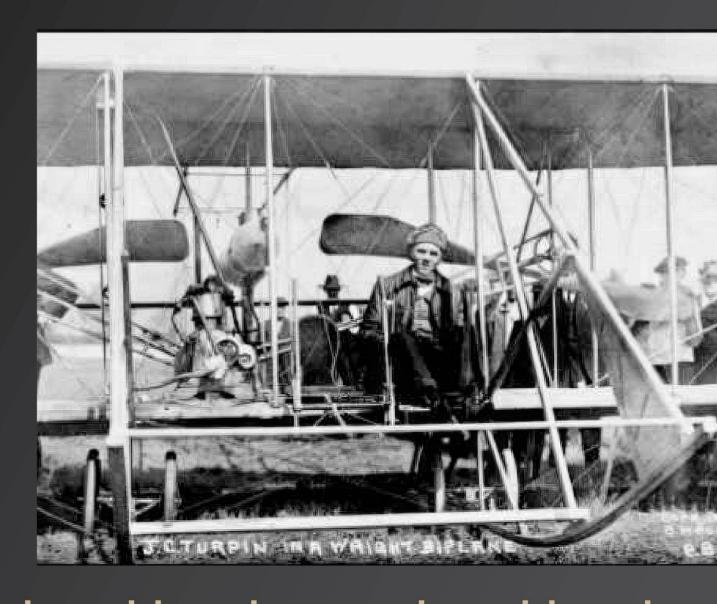
Elwood Mead receives Purdue's first honorary PhD in engineering

Mead and two classmates were Purdue's first graduates in agriculture in 1882. In 1924, he became chief engineer for the Hoover Dam. After his death, the dam's reservoir, Lake Mead, was named in his honor.



#### J. Clifford Turpin graduates from Purdue University

Turpin became a Wright exhibiting flight pilot and was a national superstar in flight. He received the 24th pilot license issued in the United States. Turpin also helped teach Henry "Hap" Arnold to fly. Arnold became known as the Father of the U.S. Air Force.



### Frederick Martin earns a Purdue Mechanical Engineering degree

Martin became an Army pilot after World War I. In 1924, he organized, planned and led an expedition of four planes flying around the world. The mission—a first—was successful, but Martin had crashed in Alaska and was missing for 10 days, unable to complete the flight with the others. He later became a major general, placed in charge of U.S. Army Air Forces in Hawaii. Martin and his Navy counterpart Patrick Bellinger wrote a report correctly predicting the Japanese attack that occurred December 7, 1941. It was ignored.

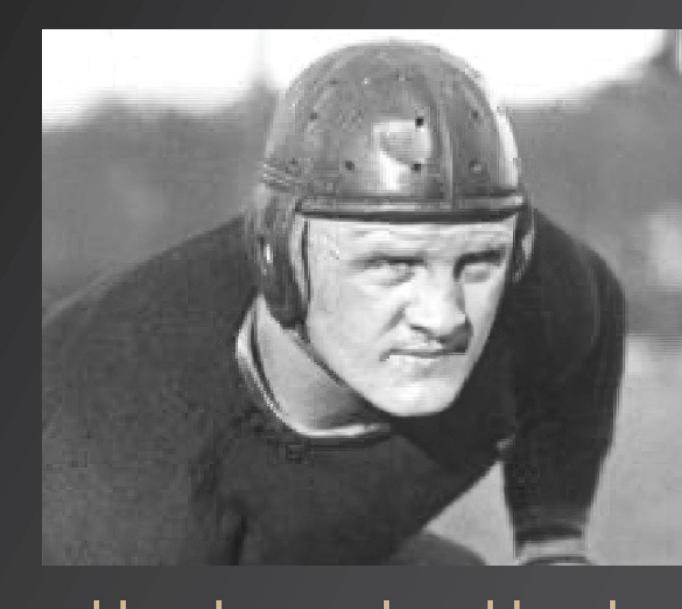


Purdue launched the School of Chemical Engineering

ChE courses had been taught since 1906 by the Department of Chemistry. The students all studied German since much of the important work in the field was taking place in Germany. In 1917, when the United States entered the Great War, most students switched from German to French.

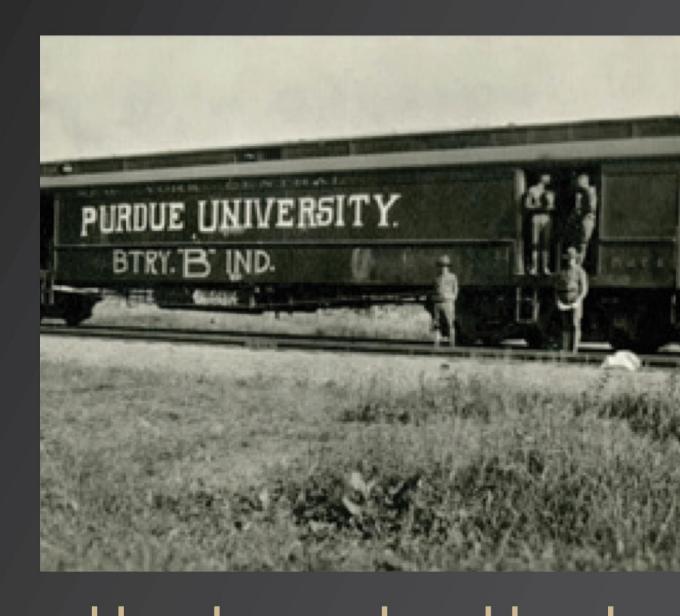
Purdue all-time great Elmer Oliphant earns a Mechanical Engineering degree

He received nine varsity letters in four sports at Purdue in football, basketball, baseball and track and was an All-American in football. Oliphant cored 43 points in one Boilermaker football game, running for touchdowns and kicking extra points. Oliphant went on to U.S. Military Academy for another engineering undergraduate degree, and Army allowed him to play sports. He was later named to the All-Time All-American team.



Purdue Battery "B" was ordered to patrol the U.S. Mexico border

A revolution was under way in Mexico, and one of its leaders, Pancho Villa, was raiding U.S. border towns. When Americans were killed in a raid on the small town of Columbus, New Mexico, Woodrow Wilson sent army troops into Mexico to capture Villa. He also ordered National Guard units from around the country to patrol the border. The U.S. Army didn't find Villa; Purdue students were finally allowed back on campus in September.



### President Winthrop Stone encourages miltary service

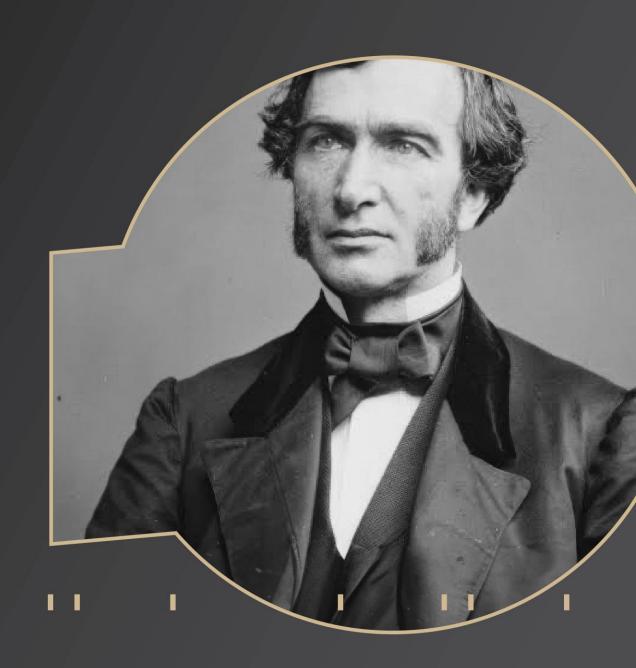
He wrote in his diary: "Congress assembles to a special call to hear the President's message on a state of war with Germany. Great excitement throughout the country." On May 30 he said, "No other university has a higher responsibility to the nation than Purdue. Purdue, and others of like kind, was conceived and born in a spirit of service to the nation..."

- Purdue President Winthrop Stone



#### James Manson earns a Purdue Civil Engineering degree

James Mason was 22 years old when he graduated from Purdue with a degree in Civil Engineering, married, and joined the Army and served with an artillery unit in France. Manson also served with Purdue Battery "B" in Texas one year earlier. His grandfather had served as president of the Purdue Board of Trustees.



### Purdue University rebuilds its armory

Original 1874 Purdue Armory, which burned in 1916. Nearly 170,000 square feet. Nearly 2,600 Army men on active duty started arriving on campus the day after dedication for special training in maintaining automobiles and trucks, and they were housed in the new Armory. During the war, engineering faculty helped train 1,634 auto mechanics, 1,278 truck-masters, 750 radio operators, and 201 concrete workers.



Military barracks were built and training began on Purdue's campus

In 1918, the War Department announced it would draft all eligible men 18 through 45 beginning in the fall. This included all male students at Purdue and most of the faculty. In response, government created the Student Army Training Corps (SATC). Barracks were built on university campuses to house men receiving military training along with college classes.

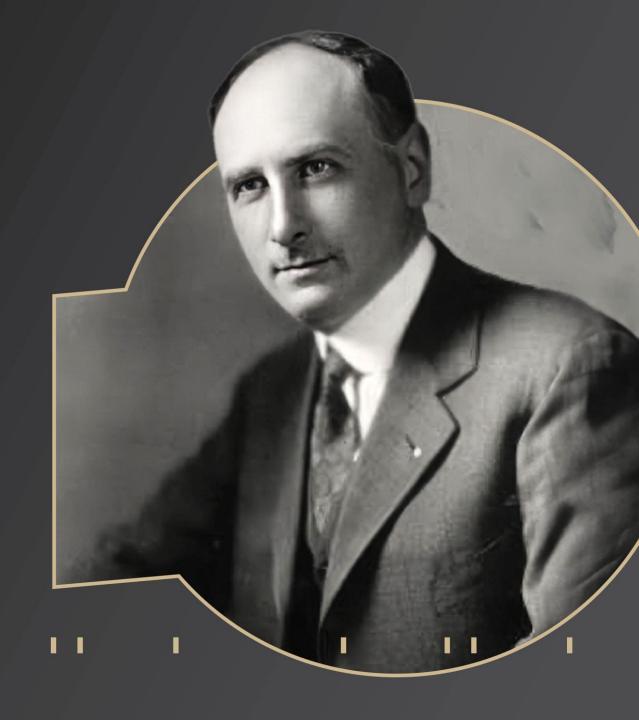
Flu pandemic spreads through Purdue barracks

1,500 men lived together in Purdue SATC barracks. 300 men at Purdue contracted flu during the fall of 1918 pandemic and eleven of them died. 67 Purdue men died in uniform during the Great War; at least 37 of them died from the flu. More than 675,000 Americans died of influenza in 1918. About 45,000 American soldiers died of influenza and related pneumonia by the end of 1918.



### A. A. Potter named Dean of Purdue Engineering

Potter was Dean of Purdue Engineering from 1920 to 1953. He increased the number of professional engineering courses and added four new schools. He is also responsible for three new campus buildings. From 1945 to 1946, Potter served as director of the Purdue Research Foundation and Purdue's acting president. He was called "The Dean of Deans" because of the large role he played in the direction of engineering education in the United States.



### Materials Engineering (Metallurgy) curriculum was created

In 1923, the foundation for the development of a curriculum, Metallurgy at Purdue, was created by Professor John Leighton Bray in the Department of Chemical Engineering. In 1938, the name of the school was changed to Chemical and Metallurgical Engineering. In 1940, a Chemical and Metallurgical Engineering building was opened across the mall from the Mechanical Engineering Building. There have been more name changes. Today it is is the School of Materials Engineering.



Maurice Zucrow receives a doctoral degree, completing his dissertation in mechanical engineering

Maurice Zucrow was born before the Wright brothers' first flight. He lived to see a fellow Purdue University graduate walk on the moon, played an important role in aerospace research, and helped educate generations of engineers. President Frederick L. Hovde called Zucrow one of the nation's leading rocket engineers. He received Harvard's first engineering bachelor's degree magna cum laude in 1922 and a master's degree at Harvard in 1923.



### Roscoe George develops the first electronic television receiver

Professor, inventor, and television pioneer Roscoe H. George received his B.S. in electrical engineering from Purdue in 1922 and his master's in 1927. While researching at Purdue, George developed the first electronic television receiver. A license to broadcast TV was granted on Oct. 27, 1930. The first TV station in Indiana, W9XG came on the air on Dec. 31, 1931, and on March 29, 1931, regular broadcasting began. He was assisted by Professor Howard J. Heim and was funded by the Grigsby-Grunow (Magestic) Radio Company and later RCA (Radio Corporation of America) after Grigsby-Grunow withdrew its support.



## Haskins became a professor of aeronautical engineering

Graduated from Purdue in 1916 with a degree in mechanical engineering. Served in Army Air Force, World War I. Flew to campus from Dayton, Ohio, in June 1919 with a proposal to start a program in aeronautical engineering. Elective aeronautical engineering courses offered by Mechanical Engineering 1921-22. In 1929, Haskins became a Purdue professor of aeronautical engineering and built the program until leaving in 1937, returning to the Army Air Corps and serving during WWII. After the war, worked for the Civil Aeronautics Board. Retired in Pasadena, California. In 1969, he sat in his living room and watched Neil Armstrong, who studied in the program he proposed and built, step on the moon. The other man on the moon that day, Buzz Aldrin, was the son of his lifelong best friend.



#### The Purdue University Airport was created

In 1930 through leadership of President Edward C. Elliott and Board Chair David Ross, who bought the land and donated it to the University, the Purdue University Airport was created. First university airport in nation. At first, it had just a dirt runway. At one point, someone mistakenly planted corn. By 1935, runways were paved and hangars went up. In 1939, the U.S. started the Civilian Pilot Training Program to prepare pilots needed for national defense. Purdue Airport's first location was chosen. Before World War II, hundreds of pilots were trained — among them, the son of one of the country's most famous pilots, Jimmy Doolittle Jr.



Charles Ellis joins the Purdue Engineering faculty

Charles Ellis joined the Purdue faculty in 1934 as a professor of structural engineering. He remained at Purdue until his retirement in 1946. He was an expert in bridge design, and before coming to Purdue, he co-designed the Montreal Harbor Bridge and designed the structure of the Golden Gate Bridge almost single-handedly. He died on Aug. 22, 1949, just 12 years after the completion of the Golden Gate Bridge. In 1994, the American Society of Civil Engineers named the Golden Gate Bridge one of the "Seven Wonders of the Modern World." Ellis' contributions were not recognized until 2012.

Amelia Earhart begins advising and speaking at Purdue

In September of 1934, Purdue President Edward C. Elliott spoke at a conference on women in New York City where he met Amelia Earhart.

Elliott invited her to speak at Purdue and then hired her to spend several weeks every semester at Purdue as an advisor to aeronautics and career counselor in women students.



# 1935-37

#### Earhart's impact on Purdue

She lived in Duhme Hall with female students and told them they could be housewives if they wanted, but also engineers, doctors, pilots, and everything else. She transformed the thinking of women, who in a few short years, would go to work to replace men who had gone to war. American wartime production by women is one reason we won. In 1937, Purdue Research Foundation helped to buy the airplane she attempted to fly around the world roughly at the equator. Here she is at the Purdue Airport with her plane and with her tan Ford with red leather seats. She and navigator Fred Noonan disappeared in the Pacific on July 2.



Lillian Gilbreth became the first woman on Purdue Engineering faculty

Gilbreth, an efficiency expert, had a PhD and worked as an industrial engineer with her husband conducting time and motion studies. Helped to pioneer ergonomics. First woman on Purdue Engineering faculty in 1935. Stayed until 1948. Perhaps the first female engineering professor in the nation. First woman elected to National Academy of Engineering in 1965. Helped establish common height for kitchen counters and the location of appliances.



George Welch came to Purdue in 1937 to study mechanical engineering

In December of 1941, he is at Pearl Harbor and becomes a hero. Part of the movie Pearl Harbor is based on his story. George Welch had been up all night playing cards when he heard the attack. He and a friend drove to a remote airfield where their planes were located and got off the ground. Twenty-eight Japanese planes were shot down that morning. Welch is officially credited with four of them—more than anyone else. Some say he actually shot down six. He became one of World War II's first aces. After the war, the U.S. Air Force officially credits him as being the second man to break the sound barrier. Many say he was actually the first.



Jimmy Doolittle Jr. enrolls in Purdue's mechanical engineering program

His father, Jimmy Doolittle Sr., was already one of the most famous pilots in the nation for setting flight records. He was the first to take off and land using only instruments. In April of 1942, the senior Doolittle would add to his fame by winning a Medal of Honor and being promoted to general after leading a bombing mission on Toyko. Doolittle Jr. learned to fly at the Purdue Airport in the Civilian Pilot Training Program before entering the Army Air Corps in 1941. He flew combat missions in the Pacific.



#### Purdue becomes a military camp

One month after the bombing of Pearl Harbor in December of 1941, the academic year at Purdue shifted from two to three semesters so that students could graduate in two years and eight months and enter the military. President Edward Elliott took a government position in Washington, and Engineering Dean A. A. Potter helped share presidential duties with two others. Purdue quickly resembled military camp with many programs, including Navy V-12 and Army Specialized Training programs focused on engineering. In 1943, when the total number of students and trainees on campus totaled 9,002, regular degree-seeking students were outnumbered two to one. About 17,500 Boilermakers served in WWII. More than 500 died.



### 1941-45

George Hawkins named director of the U.S. Army Ordinance Research Project at Purdue

During the war, mechanical engineering
Professor (later Dean of Engineering) George
Hawkins was named director of the U. S. Army
Ordnance Research Project at Purdue. Much of
the ordnance research performed by Purdue
mechanical engineering faculty centered on gun
mechanisms and the heating and cooling barrels
of automatic weapons during long bursts of firing.
They tested many experimental weapons at the
firing ranges built around campus.



# 1941-45

Campus firing ranges were created for research and training

The first of Purdue's firing ranges was an abandoned gravel pit and walnut grove just west of the Purdue Airport. The researchers later created a range beneath the west side stands at Ross-Ade Stadium. Another range was located behind the Mechanical Engineering Building. Finally, ranges on the hill beside the men's tennis courts were enclosed. About one million rounds of ammunition was fired. The U.S. Army presented the Ordnance Distinguished Service Award to the university. It was the first Ordnance Distinguished Service Award presented to any university in the nation.



# Frederick Branch became the first African American U.S. Marine Corps officer

In 1944, Frederick Branch came to Purdue to study civil engineering as part of the Navy V-12 program. One year later, he became the first African American commissioned to an office in the U.S. Marine Corps. In 1941, President Franklin Roosevelt ordered the Marines to accept African Americans. Branch entered the service in 1943, interrupting his studies at Temple University in Philadelphia. He tried several times to be admitted to the V-12 program where he could finish his education and graduate as an officer. He failed. He was finally admitted, but the military transferred him away from Purdue when he refused to leave a seat on the main floor of a Lafayette movie theater. He finished his education on the East Coast. In November 1995, the U.S. Senate passed a resolution honoring Branch "on the 50th anniversary of his becoming the first African American commissioned officer" in the Marines.



### Elmer Bruhn, first head of School of Aeronautics

Professor Elmer Bruhn arrived at Purdue in January of 1941. On July 1, 1945, aeronautics was separated from mechanical engineering with Bruhn as head. Bruhn led a study, creating within aeronautical engineering a four-year curriculum in air transportation. In 1949, Bruhn stepped aside as head of aeronautics, and its air transportation program was canceled.



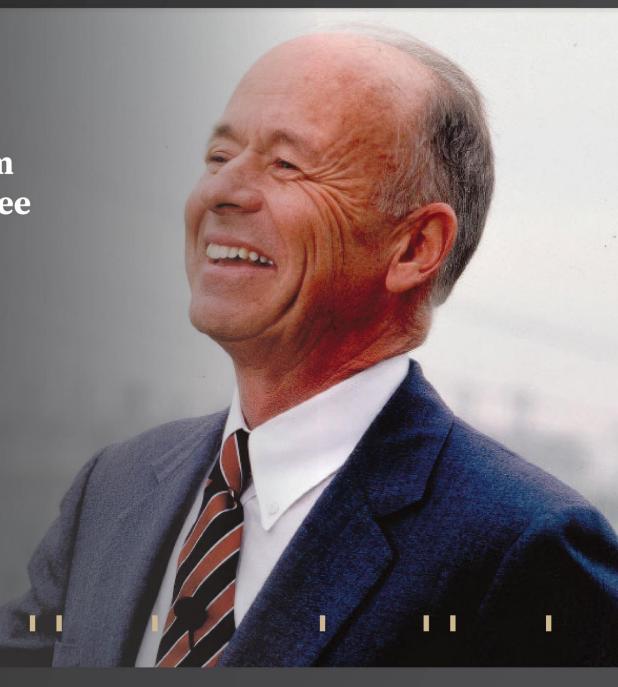
#### Frederick L. Hovde became President of Purdue University

Frederick L. Hovde, a chemical engineer who completed his bachelor's degree at the University of Minnesota and graduate degrees at the University of Oxford in England, became president of Purdue in January 1946. Prior to coming to Purdue, he coordinated British research with work in the United States, including the atomic bomb. He later became chief of Rocket Ordinance Research for the National Defense Research Committee. Researchers under Hovde worked on triggering mechanisms for the atomic bomb. President Richard Nixon attended Hovde's retirement dinner in 1971 and honored him for helping "make the war shorter and victory sooner."



Stephen D. Bechtel Jr. graduated from Purdue with a civil engineering degree

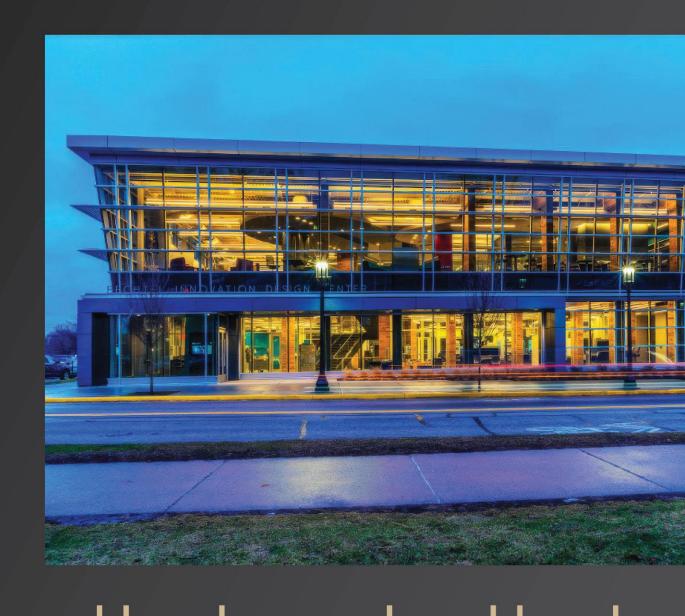
Stephen D. Bechtel Jr. graduated from Purdue with a degree in civil engineering and led Bechtel Engineering from 1960 to 1990. He was the third-generation CEO of the company, and a global figure in business, public affairs, and philanthropy. He oversaw the company's growth into a world leader in the construction industry, building infrastructure on six continents and pioneering new technologies, engineering and construction methods. The firm's sales grew 11-fold, its employees five-fold, and major projects increased from 18 to 119 during his tenure.



# 1946-Present

#### **Bechtel's legacy**

The Bechtel Innovation Design Center was named to honor Bechtel's \$18.5 million leadership gift through the S.D. Bechtel, Jr. Foundation. He was elected to the National Academy of Engineering (of which he later served as chairman) and the French Legion of Honor. He was named a fellow of the American Academy of Arts & Sciences, and he received a Purdue honorary doctorate, the Hoover Medal, and the National Medal of Technology and Innovation. He died in 2021.



### Maurice Zucrow returns to Purdue to teach and research

From 1929 to 1946, Zucrow worked in private industry. He helped develop the nation's first gas turbine in 1942 and a rocket used to assist seaplanes during takeoff. He returned to Purdue to teach and research in 1946, wrote the first textbook on jet propulsion and gas turbines, and created what was later named Maurice J. Zucrow Laboratories, which became the largest academic propulsion lab in the world and a leader in combustion. Some of his research was used in the design of the space shuttle's main engine. Zucrow died in 1975.



Charles Pankow graduated from Purdue with a civil engineering degree

Born in South Bend, Indiana, Charles Pankow came to Purdue in the fall of 1941. World War II interrupted his studies. He joined the U.S. Navy near the end of the war and was stationed in Japan until 1946. In 1947, he graduated from Purdue with a degree in civil engineering. He created Charles Pankow, Inc. in 1963. Charles Pankow Builders, Ltd. has constructed about 200 apartment buildings, condominiums, hotels and resorts, office towers, regional shopping centers, and other commercial structures. Pankow and his colleagues innovated concrete-forming technology. In 1999, the Engineering News-Record recognized him as one of the top six builders of the prior half-century.



Iven Kincheloe graduated with a degree in aeronautical engineering

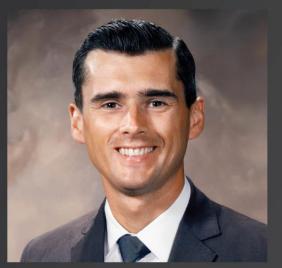
Iven Kincheloe arrived on campus in the fall of 1945 and graduated in 1949 with a degree in aeronautical engineering. He entered the U.S. Air Force as a second lieutenant and went into flight training. He served in the Korean War and afterward remained in the military as a test pilot. On Sept. 7, 1956, he flew the Bell X-2 faster than 2,000 miles per hour to a height above 126,200 feet. Nicknamed "Spaceman," Kincheloe became the first person to fly an airplane above 100,000 feet. He surely would have been named an astronaut, but in July 1958, he was killed in the crash of an F-104A at Edwards Air Force Base.



## 1950s

# Purdue's first astronauts graduate from engineering programs

First was Virgil "Gus" Grissom, BSME '50, selected among the original Mercury Seven. Second American, third human in space. Next came Neil Armstrong, aeronautical engineer who graduated in 1955 and 13 years later, became the first person to step on the moon. Gene Cernan, an electrical engineer who graduated in 1956, was the last person on the moon in 1972. Roger Chaffee, BSAE '57, died in January 1961 with Grissom in an Apollo 1 accident before launching into space.







Purdue Engineering created the industrial engineering department

The formation of the department comes from a long history of the discipline being taught at the university, including some courses taught by Lillian Gilbreth, the First Lady of Engineering. Some of the original faculty members took leaves of absence, at great personal sacrifice, to secure their doctorates from other universities. In 2024, U.S. News & World Report ranked its online graduate program at No. 1 and undergraduate program at No. 2 in the U.S.



# 1953-60

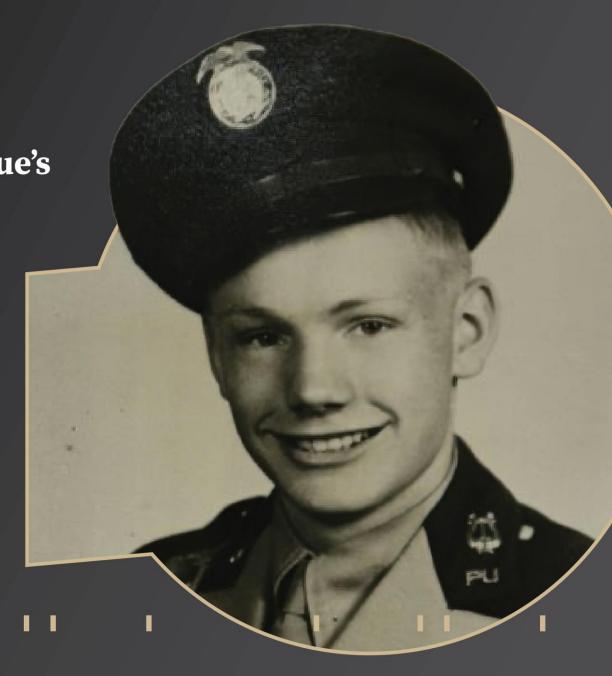
R. Norris Shreve led Purdue's revitalization of an existing university in Tainan, Taiwan

R. Norris Shreve was a chemical engineer, inventor, entrepreneur, educator and collector. After joining the faculty in 1930, he helped build the School of Chemical Engineering. From 1953 to 1960, he led Purdue's revitalization of an existing university in Tainan, Taiwan. Money for the program came from the U.S. government. A number of faculty from West Lafayette lived and worked at Tainan during the effort. It revitalized the engineering school that became National Cheng Kung University, helping to rebuild Taiwan after WWII.



Neil Armstrong graduates from Purdue's Aeronautical Engineering program

Already a pilot, he enrolled at Purdue in 1947. He had just turned 17 years old when he entered the aeronautical engineering program. He came on a U.S. Navy program and played in the band. Called to active duty midway through sophomore year, January 1949. Served in Korea, had to bail out once, 78 combat missions. Returned fall of 1952 and graduated in January of 1955. Not considered for Mercury 7 because he had left the military. Asked to come to NASA with the second class of astronauts. First man to step foot on the moon on July 21, 1969. Died in August 2012.



#### Neil Armstrong and Eugene Cernan's friendship at Purdue

The first and last men to walk on the moon were long-time friends and acquaintances while students at Purdue. Cernan came to Purdue in 1952 and graduated in 1957, one year after Neil. Cernan received a Navy Scholarship at the University of Illinois but turned it down to study electrical engineering at Purdue, participated in NROTC. He entered the Navy Reserve after graduating but transitioned to active duty as a pilot. Selected as an astronaut in 1963. Flew on Apollo 10 and did everything but land on the moon. Commander of Apollo 17, the last moon landing in December of 1972.



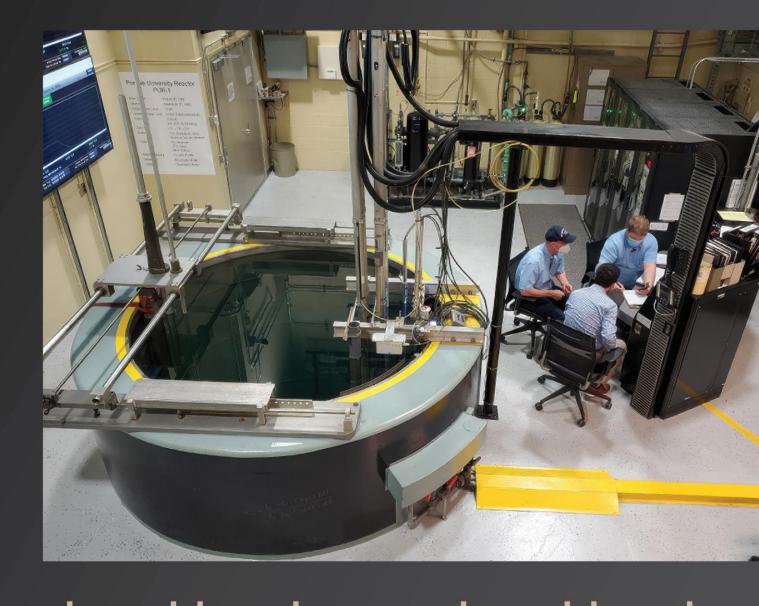
The Navy Enlisted Scientific Education Program is started at Purdue

Between 1958 and 2006, 900 U.S. Navy men and women participated in an engineering and science program at Purdue. It sent enlisted Navy personnel to Purdue to receive a degree and a commission. One graduate was Michael Christian, who became a Navy pilot shot down over North Vietnam in 1967 and captured. Also receiving bachelor's and master's degrees through the program was Michael McCulley, who became an astronaut and CEO of United Space Alliance.



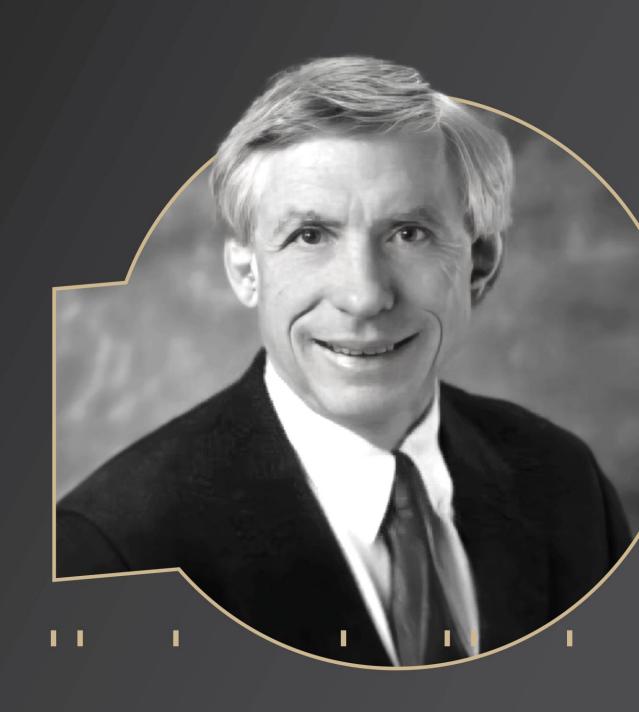
### Nuclear Engineering school forms

Many within the initial program had participated in the Manhattan Project, along with other Purdue programs. The program would soon have its own experimental reactor in 1962, PUR-1 – the first and only nuclear reactor operating in Indiana. In 2019, it was upgraded to be the first entirely digital nuclear reactor instrumentation and control system in the nation.



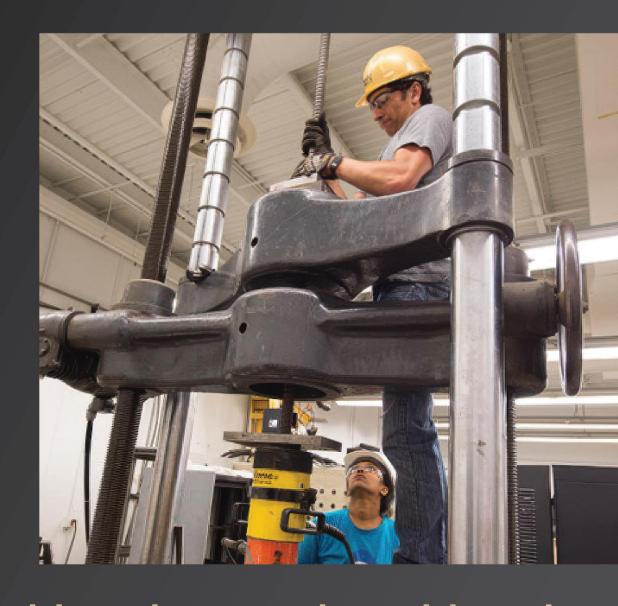
# Paul McEnroe earns his master's degree from Purdue

Immediately after completing his master's degree at Purdue in 1960, Paul McEnroe began a 23-year career at IBM and helped developed something people encounter nearly every day. In the late 1960s, he led and made technical contributions to the development of the Universal Product Code, commonly known as "the bar code."



# Robert Bowen graduated from Purdue's Civil Engineering program

Bowen Engineering Corporation, founded by Robert Bowen, would become Indiana's leading utility contractor specializing in the construction of wastewater treatment plants, power plants, industrial facilities, and underground utilities. The privately funded 66,000 square-foot Robert L. and Terry L. Bowen Laboratory for Large-Scale Civil Engineering Research provides the capacity to test full-scale buildings up to four stories tall. Dedicated in 2023.



# Purdue creates the first Women in Engineering (WiE) program

In 1969, the Purdue Women in Engineering (WiE) Program was the first of its kind in the nation and has been a model for such programs at other universities. Since then, the enrollment of women in the College of Engineering has increased from less than one percent to 26 percent. Women now receive 20 percent of the undergraduate engineering degrees granted, up from less than one percent in the early 1970s. To date, the College of Engineering has granted more than 10,000 engineering degrees to women, thanks in large part to the WiE Program's efforts.



#### **Purdue's National Society of Black Engineers chapter is born**

In 1971, two Purdue undergraduate students approached the dean of engineering with the concept of starting the Black Society of Engineers. They wanted to establish a student organization to help improve the recruitment and retention of black engineering students. In the late 1960s, 80 percent of the black freshmen entering the engineering program dropped out. It was successful at Purdue and went national in 1975. It now has more than 31,000 members supporting black engineers nationwide.







NSBE Founders Dr. Arthur J. Bond & the Chicago Six









Stanley Kirtley, BSCE





John Logan, BSCE



Brian Harris, BSIDE



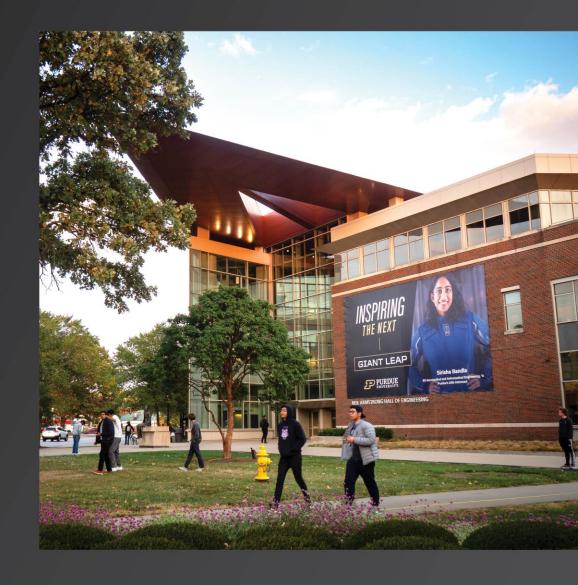
George Smith, BSEE

1971 Pictures of the Chicago Six

SBE Logo Designer is George Smith

### The School of Aeronautics and Astronautics is established at Purdue

The name change testified to the role astronautics had played in the school since 1957 and would continue to have. Nearly a third of U.S. spaceflights have included a Purdue graduate, and 10-plus missions have included multiple Purdue alums. Following Grissom, Armstrong, Cernan, and Chaffee, 18 Purdue graduates flew in the NASA space shuttle program between 1981 and 2011. 17 of them were Purdue engineers. One of them, Jerry Ross, is tied at seven for the most launches into space by anyone in the world.



Leslie Geddes begins teaching and research in biomedical engineering

Leslie Geddes came to Purdue in 1974, and his research and teaching laid the foundation for creation of a department of biomedical engineering in 1998. A recipient of the National Medal of Technology presented by President George W. Bush, Geddes created innovations ranging from burn treatments to defibrillators and ligament repair to tiny blood pressure monitors for premature infants. By 2007, work by Geddes and others led to the creation of the Weldon School of Biomedical Engineering offering undergraduate and graduate degrees.



# NASA Astronaut Scott Tingle earns his master's degree from Purdue

Scott Tingle received a Purdue master's degree in 1988 and was selected by NASA in June 2009. Tingle launched into space on board Soyuz MS-07 in December 2017 and returned in June 2018. He is now in training and is scheduled to be commander of a Boeing Starliner mission to the Space Station in 2025.



Commercial Astronaut Beth Moses earns her bachelor's and master's degrees from Purdue

We have a new class of astronauts flying today for private space companies – commercial astronauts. Beth Moses is a professional astronaut and chief astronaut instructor for Virgin Galactic's SpaceShipTwo program. She was the first woman to make a spaceflight on a commercially launched vehicle in February 2019. She has flown on six missions. She received a BS in 1992 and MS in 1994, both in aeronautical and astronautical engineering at Purdue.



#### Commercial Astronaut Audrey Powers earns her bachelor's degree from Purdue

There will be more as we see the private sector move into space travel and exploration. Audrey Powers flew into space in October of 2021 on a Blue Origin mission. Blue Origin was founded by Jeff Bezos, also the founder of Amazon. Powers flew into space with William Shatner, Captain Kirk of the classic Star Trek franchise. Powers is vice president of mission and flight operations for Blue Origin. She received her B.S. in aeronautics and astronautics in 1999.



# Chris McNett becomes Purdue's youngest engineering graduate

We're all familiar with Sheldon Cooper on the TV shows Big Bang Theory and Young Sheldon. Cooper was a fictional character who entered college at a very young age. Purdue had its own Sheldon Cooper. He was Chris McNett, who came to Purdue at the age of 13 and graduated in 2003 at the age of 16 with a 3.97 average in computer engineering. He went on to Stanford University, graduating with a master's degree in computer science, then received his Juris Doctor law degree from Harvard in 2014. He is a principal in the Washington, DC office of McKool Smith, where his focus is on intellectual property litigation.



#### Purdue creates the nation's first School of Engineering Education

In 1953, Purdue created the nation's first
Department of Freshman Engineering to prepare
students for the discipline of their choice. In
2004, Purdue created the nation's first School of
Engineering Education, incorporating First-Year
Engineering and Multidisciplinary Engineering/
Interdisciplinary Engineering Studies. In 2005,
we launched a doctoral program. The mission of
this school is to transform engineering education
based on scholarship and research. It rests on three
pillars: Re-imagining engineering and engineering
education; creating field-shaping knowledge; and
empowering agents of change.



The School of Environmental and Ecological Engineering is launched

Purdue Environmental and Ecological Engineering (EEE) was formally launched on July 1, 2006. The B.S. degree in EEE at Purdue University-West Lafayette received formal final approval from the Indiana Commission for Higher Education on September 14, 2012. Student enrollment in the BSEEE program has grown to become one of the largest stand-alone environmental engineering programs in the nation.



Commercial Astronaut Sirisha Bandla earns her bachelor's degree from Purdue

In July of 2021, Sirisha Bandla became our second Purdue graduate to become a commercial astronaut. She flew on a Virgin Galactic mission, making her the second India-born woman to go to space. She's the vice president of government affairs and research operations for Virgin Galactic. Bandla received her bachelor's degree in aeronautical engineering from Purdue in 2011.



#### Purdue's Military Research Institute is born

The Purdue Military Research Institute launched in 2014 to focus on collaboration with our military partners. It offers access to some 1,900 faculty conducting world-class research in numerous areas of significant interest to our Department of Defense. It offers a merit-based fellowship that covers all costs for graduate degrees. It also includes a summer intern program for undergraduates from our military academies and a faculty exchange program. It provides more active military officers with graduate degrees than any non-military school in the nation.



# Nancy Ho received the National Medal of Technology and Innovation

Nancy Ho, founder and president of Green Tech America Inc. and a research professor emeritus in the School of Chemical Engineering, received the National Medal of Technology and Innovation from President Barack Obama on May 19, 2016. She was awarded the medal for: "The development of a yeast-based technology that is able to co-ferment sugars extracted from plants to produce ethanol, and for optimizing this technology for large-scale and cost-effective production of renewable biofuels and industrial chemicals."



# Mung Chiang becomes Purdue's 13th president

When the Purdue Board of Trustees began a search for a new president, it didn't have to look very far. Mung Chiang became Purdue's 13th president and the Roscoe H. George Distinguished Professor of Electrical and Computer Engineering in January of 2023. He was previously the John A. Edwardson Dean of the College of Engineering and executive vice president for strategic initiatives at Purdue. He came to Purdue from Princeton in 2017.

