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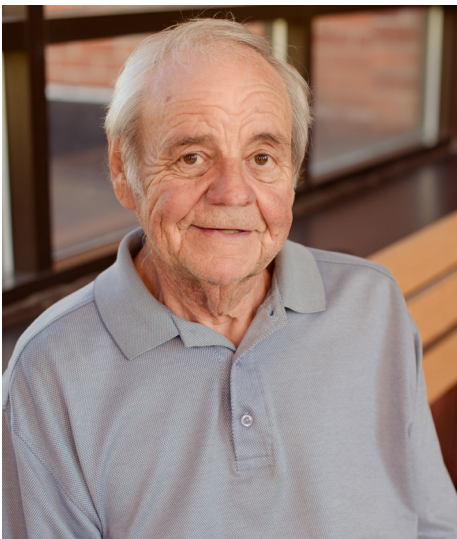


Michigan
Technological
University

Fall 2016

A Financial and
Charitable Gift Planning Guide

Foresight



Paul Williams '61

Paul E. Williams has been looking ahead since he was a kid in Negaunee, Michigan. He knew he wanted to go to Michigan Tech. He knew he wanted a solid career. And he knew he needed to save for retirement.

“But turning 70-and-a-half was an eye-opener,” the 1961 electrical engineering grad says. That’s the age when you must take a required minimum distribution

Slide-Rule Scholar to High-Tech Advocate

Paul Williams wisely invested in his future. Now he’s doing the same thing for generations of fellow Michigan Tech students.

(RMD) from your IRA. And deal with the tax implications.

“I have nothing against taxes,” Paul says. “But I wanted to put my money to work.” So he contacted Michigan Tech’s Office of Advancement to research giving options. Director of Gift Planning Karla Aho told him about the IRA charitable rollover.

In 2015 the US Congress enacted a permanent extension of IRA charitable rollovers, which allow people 70 1/2 to make annual gifts of up to \$100,000 directly from an IRA to a charity of choice without treating the distribution as taxable income.

Emphasize directly, says Paul, who reminds donors that the funds must

come from the IRA custodian to the charity. The tax break doesn’t apply if you take money out yourself and then contribute.

With a twinkle in his eye he jokes, “Some people might say I started giving for the wrong reason.”

But the truth is, Paul’s generosity was transforming this campus and the lives of our students long before this situation arose. He’s a prime example of Michigan Tech alumni and friends who use different strategies, programs, and timelines to help where and when it’s needed most. It’s blended giving, thoughtfully customized and individualized. And the real payoff?

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“You see the impact,” Paul says. “I’m glad to let people know about it. I hope it will help increase giving.”

A few strategies that work for him:

- **Find a trusted financial advisor.** “Find someone good, don’t just turn it over,” says Paul, who

doesn’t want to be an active investor on a daily basis. “That would be too much like work,” he says, chuckling. And take time away from the things he enjoys, like RVing, or fishing on Perch Lake.

- **Tap into Michigan Tech**

resources. “It makes it easy,” says Paul. Michigan Tech can gather any information you need to help you in the process, from connecting you with faculty leaders to explain where your gift is most needed to developing a

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Leave More to Your Loved Ones...



Reduce Taxes for Heirs

Like many working people, your Individual Retirement Account (IRA) may become the largest part of your estate. As part of your overall planning strategy, it’s important to be aware of what happens to your retirement plan throughout the stages of your life.

When you withdraw money from a qualified retirement plan, it is subject to income tax. This is

also true for any beneficiaries or heirs who receive funds after you pass away. There is no way around the tax. You and your beneficiaries can count on it.

A retirement plan can be a tax-efficient and simple way to include the Michigan Tech Fund in your estate plan. A bequest of part or all of your IRA allows you to make full use of your funds during your lifetime, after which the charity of your choosing will benefit in the future from what remains.

As an alternative to leaving retirement assets to loved ones, consider leaving appreciated stock instead. Your heirs will receive the stock income tax-

free and with a basis equal to its value when the stock is received. Income tax is due only when the stock is sold, and only the amount in excess of the stepped-up basis is subject to tax.

70 1/2 or older? An IRA Rollover Makes Sense!

In 2015, Congress reauthorized the IRA charitable rollover permanently. This means that if you are 70 1/2 or older, you can make a charitable gift of up to \$100,000 from your IRA per year and see the impact of your giving during your lifetime. Your gift will qualify for your required minimum distribution, and you will not have to pay federal income tax on the amount transferred directly from your IRA to charity. Check with your advisor on how an IRA rollover gift could reduce your taxes while helping charities like the Michigan Tech Fund.

Estate Gift to Heirs

\$50,000 gift of retirement assets

Amount Subject to Tax

Entire \$50,000 is subject to tax when it is withdrawn

\$50,000 gift of appreciated stock

Only the increase in value exceeding \$50,000 is taxed when stock is sold (no tax due on initial \$50,000 gift)

Take the First Step Today

A home. CDs. Individual Retirement Accounts. Other financial assets. “Oftentimes people think ‘this doesn’t apply to me,’” says Michigan Tech Director of Gift Planning Karla Aho. “But it adds up.” You can contact us to learn more about satisfying your required minimum distribution while avoiding taxes, reducing your taxable income even if you don’t itemize, and helping to further the work and mission of Michigan Tech. Planning for the

future is important to ensure your wishes are followed. Please complete and return the enclosed reply form to learn more about the benefits of giving through your retirement plan.

Email: giftplan@mtu.edu

Phone: 906-487-3325

Visit our website at mtulegacy.org

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giving schedule or method that resonates with your goals.

- **Consider blended giving.** In Paul's case, the ideal mix so far is planned giving, annual giving, and IRA charitable rollovers. Each has advantages for Paul and his family and for Michigan Tech. Each focuses on educational aspects that he cares about. Two serve as a lasting tribute to his wife, Susan, who passed in 2010.

Blended Giving in Action

There's the **Paul and Susan Williams Center for Computer Systems Research**, a 10,000 square-foot high-performance computing center focused on multi-disciplinary research. Opened in 2011, it's a far cry from the slide-rule days of Paul's learning years at Michigan Tech.

There's also the **Paul and Susan Williams Endowed Scholarship**, awarded annually to fellow graduates of Negaunee High School who attend Michigan Tech.

Michigan Tech Memories

Paul always knew he'd go to college, even though in the late 1950s "I can make as much at the mine" was a common mindset on the bustling Iron Range. He spotted a Michigan Tech application form in the school office.

"It was easy to fill out, only two pages," he says. No SAT or ACT test scores required in those days. Just academic transcripts. But he had doubts. His grades weren't great. "I did get the letter that I was accepted," he recalls, smiling. "I had to do a lot of changing in my study habits."

He was raised by foster parents. Martha, his foster mother, was secretary to a mining company president. That gave him an in on a good-paying summer job. "I was a flunky," he remembers. "I could have stayed at the mines and worked my way up, but I saw a better opportunity."

His family also helped with education costs. He's glad he didn't have to work during the school year. He put all his effort into studying. His favorite Michigan Tech memory is simple:

"Graduating. It was like a big weight off. 'I'm gonna make it.' It was a hard four years. But I had several jobs waiting for me, which is true of most Michigan Tech graduates, and that made it all worth it."

"There were many, many jobs to choose from," he says. "Even the CIA was hiring."

Some things haven't changed. Michigan Tech still makes applying easy and has a stellar job placement rate. Paul's advice to students of today? "Work hard, take advantage of the many

opportunities at Tech, and success is yours."

What does the future hold?

Paul, who retired after a fulfilling career in the aeronautics industry that includes 30 years with Hughes Aircraft, continues the lifetime habit of looking ahead. He's been talking with Dan Fuhrmann, the Dave House Professor in Computer Engineering electrical and computer engineering chair, about exciting research projects. "I had some luck along the way," says Paul. "My family is taken care of. I could buy a bigger house or car. I wouldn't feel any better," he says. Then, with another chuckle he jokes: "My goal is to die broke but I don't want to overshoot it."

Michigan Tech's McNair Society

The McNair Society, named for Fred McNair, university president from 1899-1924, honors alumni and friends who leave a legacy for Michigan Tech through their estate plans. We welcome these new members:

John '71 and Barbara Baker

Joyce and Arne '52 (deceased) Koskela

Kimberly K. Nowack '85

Robert '72 and Alayne Schaefer

Linda and John Schuh

Helena '94 and David Seiver

Terry Sharik and Karen McFarland

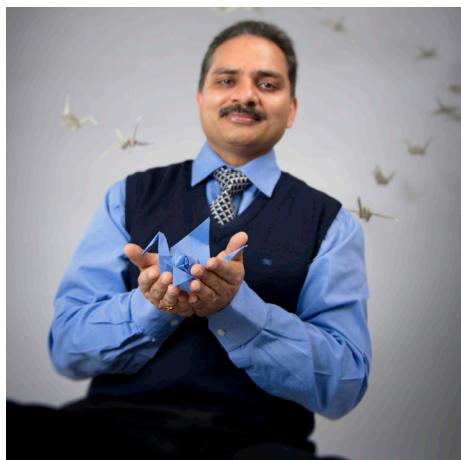
Sandra (Seaser) '78 and Michael Skinner

Douglas and Norma Lee Stuart

Kenneth '73 and Karen Van Kley

John '64 and Frances (deceased) Zarlring

Please contact our Office of Gift Planning if you have provided for the future of Michigan Tech through a bequest or a planned gift. We want to honor you with membership in the McNair Society.



Paper cranes illustrate the phenomena of misfolded proteins in a Michigan Tech Research magazine story on Ashutosh Tiwari and his research group's work to analyze the biochemical and biophysical properties of protein aggregates and understand their role in health and disease.

Michigan Tech Researchers Develop a New View for Neurodegenerative Diseases

Every 66 seconds someone in our country develops Alzheimer's Disease. It's the sixth leading cause of death in the US. An estimated 5.4 million people suffer from the disease, and that number is projected to triple in the next 25 years. At Michigan Tech, we're excited about research on misfolded proteins—the makers and markers of neurodegenerative diseases including Alzheimer's—that can have far-reaching impact on families affected by Alzheimer's and other diseases associated with aging. In this exclusive report by Michigan Tech News Science and Technology Writer Allison Mills, learn about researcher Ashutosh

Tiwari, who heads our biochemistry and molecular biology program, and his leading-edge work in a field that affects so many of us and our loved ones:

Scrambled proteins with a side of amorphous aggregates may sound like a breakfast dish, but it's actually a description of a significant cellular structure. Proteins—the building blocks of cells and life—are not as scrumptious as eggs when scrambled. In fact, misfolded and denatured proteins are the root cause of many diseases, including Alzheimer's, Huntington's, Parkinson's, and Multiple Sclerosis. Understanding how proteins fold and misfold is key to understanding these degenerative diseases. Researchers at Michigan Tech have found that two kinds of scrambled proteins fold in amorphous clumps, or aggregates. Their work contradicts prior research that indicated that the proteins should form stringy, fibril structures.

Tiwari, an associate professor of chemistry, calls misfolding “a breakdown of the cellular machinery” that leads to a number of diseases. “If proteins are aggregating in different parts of the brain, they can affect different functions,” he says, explaining that these aggregates are called many names including plaques, tangles, and pick bodies. “At the end of the day, we are describing a very specific structure of an aggregate and the big question in our field is, what are the toxic forms?”

Proteins are more abundant than greasy spoon diners along an interstate, so Tiwari and his team narrowed this research question down.

They examined two proteins and denatured them by messing with the chemical bonds between sulfides. The experiments all ran at normal body temperature and pH. Past research has focused on inducing misfolded proteins in more acidic conditions or using strong denaturing agents. Even with these differences in appearance, after undergoing the same disulfide bond scrambling, the proteins responded in a similar manner. They formed amorphous aggregates. Tiwari and his team then visualized the proteins using a scanning electron microscope (SEM) and fluorescence. Through several techniques, including a probe that is now patented, they determined the properties of the aggregates and the destabilization of the protein that leads to aggregation. Delving into the mechanism of aggregation is the next step. And determining what's behind the differences between different protein aggregates will continue to shed light on neurodegenerative diseases.

Nethaniah Dorh, a graduate student in the chemistry department, came to Michigan Tech specifically to work with Tiwari on this project. “Because of the scope of the fluorescent cellular probe we developed and the way it works, it could apply to Alzheimer's and even Parkinson's,” he says. “So there's a wide range of people that could be impacted. Our population is aging. So, at some point if I contribute, this could help me as well as my parents and other older generations. It has great impact for the world.”

The Protein Misfolding Diseases Research Fund supports Tiwari's work. If you'd like to help, please make your gift at mtu.edu/giving or contact us at 906-487-2310.

For More Information on Gift Planning



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