An industry with a strong future is enticing college students across the country to pursue new types of careers. 3D printing has had an average annual growth rate of 26.4 percent since its beginnings almost 25 years ago. Yet, here in the Hudson Valley, students in the groundbreaking Digital Design and Fabrication program at SUNY New Paltz feel the possibilities of 3D technology will only multiply in the years to come.

HV3D is an industry cluster development initiative initiated by Hudson Valley Economic Development Corp. HV3D has a critical educational component, the newly created Hudson Valley Advanced Manufacturing Center at SUNY New Paltz funded with start-up investments from HVEDC board members Hudson River Ventures and Central Hudson.

The center combines “all of the things we’re doing in 3D printing,” said Daniel Freedman, dean of the School of Science and Engineering and director of the Hudson Valley Advanced Manufacturing Center. “It’s a point of connection between all of the programs going on internally (on campus) and everything we’re doing with external partners, whether they are the local school districts, community colleges or industry partners.”

The Digital Design and Fabrication program (DDF) is a collaborative effort of the Schools of Fine and Performing Arts and of Science and Engineering. The goal of this certificate program is to provide an introduction to additive manufacturing, social/cultural/technological design thinking, mechatronics and programming. A group of 12 select undergraduates have been in the program since the start of the fall semester.

“The result of this unique partnership helps create students that are creative thinkers and problem solvers that will be able to navigate both large-scale industrial production facilities to small-scale, limited-run artist and designer studios,” said visiting assistant professor Arthur Hash.

The non-credit program is geared toward artists, designers and entrepreneurs that are interested in expanding their skill-sets through 3D printing technology. Since the start of the program there has been increased interest on campus, not only from the Fine Arts and Engineering departments but also from the Geology, Anthropology, Biology, Art History and other departments.

“For a long time I think the (Digital Fabrication) lab was the Fine Arts department’s best kept secret but now, with the launch of the DDF program, the interest has surged and we are always full with equipment buzzing and lasers engraving almost 24 hours a day,” said Hash.

Paige Munroe, a Fine Arts major with a concentration in Metals, enrolled in the program to learn how to use Computer Aided Design (CAD) software that would help her design three dimensional metal projects. Now, she uses CAD program Rhinoceros daily to realize specific details of her ideas.

“I am able to draw, develop and imagine my ideas more clearly than before,” said Munroe. “It has become one of the most valuable tools I’ve learned here at New Paltz.”

Munroe’s long-term career goal is to become a professional metalsmith and work in her very own studio. Until then she wishes to continue bettering her technical skills in order to reach the professional level in her field. She feels 3D printing technology not only offers much to the design world as a whole, but also has many applications to her specific career path.

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Catskill Distilling Company has strong roots in the Hudson Valley. Launched by distiller Monte Sachs after the New York State Farm Distillery Bill passed the state legislature in 2007, it has quickly become a favorite of spirits aficionados locally and beyond.

Sachs grew up on a dairy farm in Connecticut and spent much of his adult life practicing equine medicine. He first encountered the art of distilling while attending veterinary school in Italy, but he didn’t think seriously about entering the field until about five years ago. He and his wife, Stacy, opened Catskill Distilling Company in Bethel near the historic Woodstock Festival grounds, pairing it with the Dancing Cat Saloon, which offers Catskill spirits, food and a number of local craft beers.

“Opening our distillery and doing business here in Bethel has been a dream come true,” said Sachs. “Before we opened Catskill Distilling, it had always been an interest of mine, and the law that passed six years ago provided a great excuse for us to go for it.”

The distillery uses as many local ingredients from area farmers as possible, as well as water from the Catskill Mountains. It purchases its grains from a mill in the Hudson Valley, and the mash by-product created through the distilling process goes back to local farms for animal feed. Catskill Distilling Company also uses local fruit from the region’s orchards.

“Buying products and ingredients locally has been a big focus for us,” said Sachs. “There are just so many benefits to supporting local farmers and other businesses, both economically and ecologically. We feel it’s the responsible thing to do, and it has been a wonderful experience working with fellow businesses here in the Hudson Valley and in other areas of New York State.”

Catskill Distilling Company offers a number of unique spirits, including its Curious Gin, Wicked White Whiskey, Bosco Monte Vecchio Grappa, Defiant Rye and the One and Only Buckwheat. The distillery is also dedicated to local art, music and history, incorporating it into its products as much as possible. An offshoot of the Dancing Cat Saloon is the recently opened Stray Cat Gallery, which features the work of local artists. Both the saloon and gallery are located in old Victorian houses, and the art deco bar in the Distillery’s tasting room dates back to the 1939 World’s Fair. Catskill Distilling Company also takes pride in the role the

Woodstock Festival has played in the region’s history, which is reflected in at least two of its spirits: Most Righteous Bourbon and Peace Vodka.

“We take a lot of pride in the local history and culture,” Sachs said. “The Woodstock grounds is a major draw, but there is also a thriving arts community here. We want to contribute and foster local art, music and culture as much as we can. The Dancing Cat Saloon and Stray Cat Gallery help us do that.”

In addition to Monte and Stacy Sachs, Catskill Distilling Company has benefited from the work of Christian and Jacob Carl, whose family has generations of distilling knowledge behind them — dating all the way back to Germany in the late 19th century. In its early days, the distillery also sought the advice of legendary Master Distiller Lincoln Henderson, who was responsible for developing Woodford Reserve and Jack Daniels whiskeys over the course of his illustrious career in the industry.

As Catskill Distilling Company continues to grow, it is becoming a major source of pride for Bethel and the Hudson Valley as a whole.

This is just one more example of the exceptional things happening in the food and beverage industry throughout our thriving region.
Digital Health:
Health Care Reform Provides Innovation Opportunities

As the Patient Protection and Affordable Care Act (PPACA) moves into full implementation, many business owners are concerned about how the new health care reform law will impact them. However, there are also some opportunities for entrepreneurs to step in and innovate based on new needs the law has created.

The following are three key areas that start-ups and existing business should explore, including those located here in the Hudson Valley:

Moving to digital records

While PPACA gets most of the attention, Congress actually passed and the president signed the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009. This law gives hospitals and clinics some major incentives for moving to digital records from older, paper-based systems. Doctors’ use of these new systems is skyrocketing, although current technology is far from perfect. The big players at this time in the market are Practice Fusion, CareCloud and MediTouch, but just like any emerging sector, it’s rapidly evolving.

The benefits of electronic health records are wide reaching. They have been proven to enhance the level of care delivered to patients, increase participation in one’s own care, improve the accuracy of diagnoses and save on costs. With access to instant and more accurate health records, medical professionals are able to better serve their patients while doing so more efficiently than ever before.

Patient monitoring technology

Technology is changing the way in which doctors and other medical professionals actually deliver care and monitor patients. It’s not particularly necessary anymore for patients to visit their physician for check-ups, as revolutionary new devices are allowing doctors to monitor patients without actually seeing them in person.

There’s a huge demand at the moment for devices that can track and monitor a wide range of health-related issues, such as heart rate, blood pressure, blood sugar and cholesterol levels. These devices not only provide regular monitoring, but can also be connected to doctor’s offices using cloud-based systems. This gives health care professionals the ability to remain constantly updated on a patient’s status, catching illnesses and conditions more quickly and saving on overall costs due to better preventative care.

There are a number of patient monitoring devices already on the market, but there’s much room for improvement. Expect these devices to be connected to patients’ smart phones, tablets and other mobile platforms, engaging people more into their own health and wellness.

Business analytics for clinics

Many businesses today use analytical tools to track leads, monitor sales and coordinate projects. Clinics and hospitals are using these tools to a certain degree now, but with the increased use of remote patient monitoring devices and digital recordkeeping, there will be more demand for health care-focused business analytics now and in the future.

For one, these organizations will need a way to manage all of the new data coming at them in real time. They will also need to keep better track of digital health records. But even more so, there will be a continuing need to use these tools to make clinics’ and hospitals’ business operations more efficient — something that’s important for companies regardless of the industry.

In addition to these opportunities, the Affordable Care Act may also help people who want to start their own businesses take the final leap forward. According to some studies, 2014 may see as many as 1.5 million more adults who are self-employed due to health care reform, as insurance will no longer depend largely on one’s employer.

Save the Date

The Next Big Thing
March 20, 2014
Hosted by Marist College

START-UP NY Moves Ahead

Gov. Andrew M. Cuomo’s START-UP NY program is really beginning to take shape — and many are impressed with the tax breaks and 68 tax-free zones offered to start-up and relocating businesses across the state.

The initiative officially launched in October and the state has already made real estate available at a number of key locations in the SUNY and CUNY systems, as well as a number of private colleges and universities. While the official listing of available spaces is still in progress, a number of spots have been submitted as candidates from around the state capital already, totaling about 81,000 square feet of space, according to the Albany Times-Union. As the program moves forward, more space is expected to become available, including at SUNY campuses in and around the Hudson Valley.

The purpose of START-UP NY is to attract both new and existing companies to the state by offering some substantial tax incentives. Public and private colleges can apply to have vacant properties become tax-free zones. Start-ups that use these spaces will not have to pay state taxes — including income, sales, property or business tax — for 10 full years.

In addition to that, these companies’ employees won’t have to pay state personal income taxes for the first five years they work for the organization. Even after that, these employees will only have to pay tax on incomes over $200,000 for an individual or $300,000 for couples with joint returns.

Although there is still legislation that needs to be passed at the state level, all signs point to the START-UP NY initiative formally beginning Jan. 1, 2014. This could spell great things for the future of business here in the Hudson Valley and across the state. HVEDC, along with New York State Economic Development Council, will continue to work hard to convince local economic development organizations to take a leadership position on START-UP NY with their local colleges.

For updates on this program in the Hudson Valley, visit www.startupnyhudsonvalley.com.
United Natural Foods Breaks Ground in Montgomery

An estimated 400 new jobs are coming to the Hudson Valley with the construction of the $55 million United Natural Foods distribution center in Montgomery. The company officially broke ground on the 525,000-square-foot facility at a late September ceremony.

United Natural Foods Inc. distributes thousands of products to more than 27,000 locations across North America, serving retailers, supermarket chains such as Whole Foods, food service organizations and natural product stores. Its new facility will allow the company to expand its operations and better serve its customers throughout the New York and Long Island markets, while reducing costs and emissions — fitting for a company that distributes and carries such a wide range of natural and organic products.

In moving forward with the distribution center, United Natural Foods worked hand-in-hand with the Orange County Partnership, HVEDC, Town of Montgomery and officials with the State of New York. Empire State Development provided about $3.6 million in tax credits through its Excelsior Jobs Program. The permitting officials and agencies in Orange County also made the approval processes as easy as possible for United Natural Foods. All in all, this made Montgomery an appealing choice for the company when deciding on the location of its newest distribution facility.

The center will be state-of-the-art and include CO2 refrigeration systems, huge freezer and cooler capacities, increased cold chain integrity and more. It will greatly ease the pressure on United Natural Foods’ current warehouses in the northeastern United States, which have been over capacity during the past several years because of the company’s rapid growth.

The new facility will be the second largest in the company’s system and is expected to be fully operational by fall 2014.

SUNY New Paltz Students Experience 3D Printing Reality

“A memorable moment from class was when (Hash) showed us a giant 3D printer printing a full-scale house!” said Munroe. “I was totally stunned and for the first time saw the possibility for this new technology to be really influential in our future society.”

Kat Wilson is a master of Fine Arts student, also in the Metal department at SUNY New Paltz. She works in the Digital Fabrication Lab as the Graduate Assistant and hopes to one day become a professor and teach of the many possibilities 3D printing technology can offer.

“While working in the lab there could be a ceramics major working next to a graphic designer, an engineer or a chemistry major,” said Wilson. “The environment is perfect for collaboration and for interdisciplinary connections to be made.”

SUNY New Paltz isn’t the only place that’s buzzing with excitement over the 3D Printing industry. Hudson Valley-based businesses such as Sono-Tek Corp. of Milton and Zierick Manufacturing Corp. of Mount Kisco are already taking advantage of the many opportunities the technology can offer.

“I have every intent to remain in the area and to be part of this flourishing industry,” said Wilson. “CAD can only enrich the community, economy and education of the Hudson Valley.”

“There’s a real tradition of manufacturing in the Hudson Valley,” said Freedman. “With this program and the center, we can offer local companies a higher level of technology that they may not have been able to invest in by themselves, and in-turn provide support to the economic development of the region.”

For more information, visit www.hudsonvalley3dprinting.com.