Architecture & FAB Lab
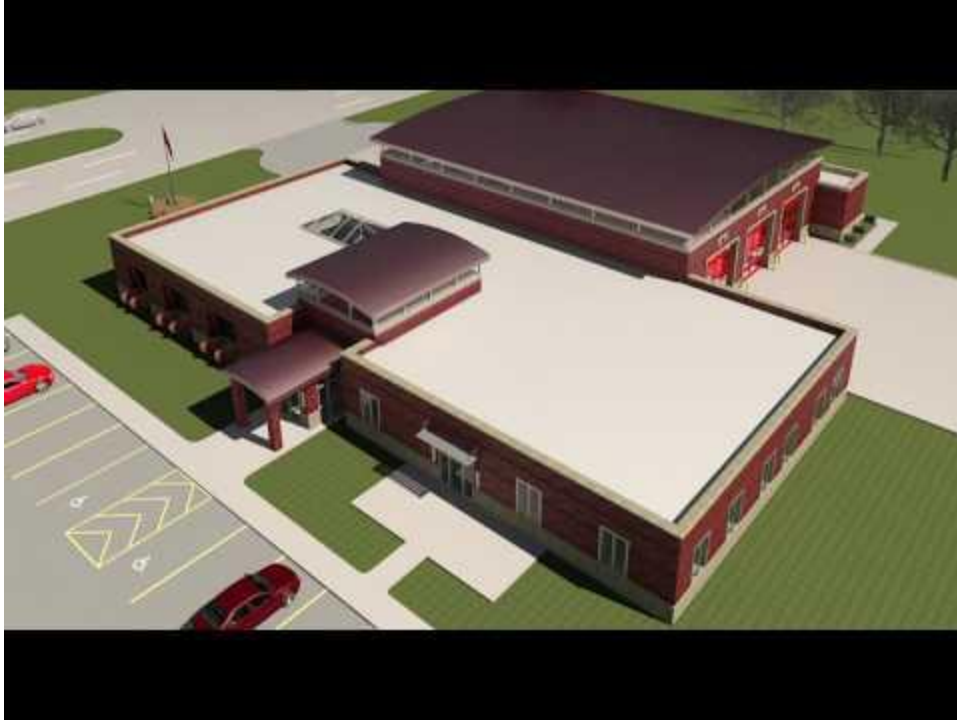
SC Johnson iMET Center

2320 Renaissance Blvd, Sturtevant, WI 53177

Architectural – Structural Engineering Technician

Associate Degree

Did you know?

- Architecture was once an Olympic sport

- "The Sims" was originally designed as an architecture simulator

- The Great Wall of China took over 2,600 years to build

- Famous architect Frank Lloyd Wright designed many buildings around Racine, including the Golden Rondelle, Wingspread, and many private homes.

https://www.archdaily.com/879764/13-weird-surprising-architecture-facts-youve-probably-never-heard
http://www.realracine.com/things-to-do/frank-lloyd-wright/

How do I become an Architect?

Apprenticeship	OR	Associate Degree

- Youth Apprenticeship
  - Gain a job in the construction field
  - Learn while you are working

- Registered Apprenticeship
  - Learn while you are working
  - Earn a technical diploma

- **Associate Degree in Structural Engineering**

- Technical Skills classes

- General Education Classes

CAREER PATHWAY
GATEWAY TECHNICAL COLLEGE

Architectural - Structural Engineering Technician

Previous Credit

There are many opportunities, both in high school and through previous college, work, and/or military experience, to earn credit at Gateway.

For more information about earning credit in high school and opportunities for credit for prior learning, please see reverse side.

Associate Degree

Architectural-Structural Engineering Technician (64 Credits)

Concentration available in:
- **Construction Project Management**

Potential Jobs:
- Project Designer
- Drafter
- Architectural Technician

Median Income:
$21.93 per hour
$45,614 annually

Career

Students are prepared to enter their career field at any point along the pathway and advance as they complete higher-level credentials.

Bachelor's Degree

Transfer up to 64 credits via existing articulation agreements with colleges such as:

- Bellevue University
- Lakeland University
- MSOE
- Mount Mary University
- Ottawa University
- UW-Stout

Salary and employment data for the Gateway district courtesy of EMSI.

gtc.edu/architectural-structural

GATEWAY TECHNICAL COLLEGE

What will you learn?

Architectural – Structural Engineering Technician (10-614-6)
Associate of Applied Science
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-E = iMET Center/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	Gateway to Success (G2S)		F*	F
1	*607-141 OR *607-103	2	Construction Basics[3,6] OR Introduction to Civil Engineering & Architecture[3,6]		F	F
1	*607-104	3	Building Material & Construction Method[3]		F	F
1	804-135 OR 804-115	3 / 5	Quantitative Reasoning[1] OR College Technical Math 1[1]	Prereq: 834-109 / Prereq 834-110	F*	F
1	*607-169	2	Surveying Basics[3]		F	F
1	*607-102	2	Conflict Resolution in CET[3,6]		F	F
1	*607-136	2	Construction Project Management[3]		F	F
2	*607-132	3	Structural Mechanics[3]	Prereq: 804-135	S	S
2	801-136	3	English Composition 1[1,6]	Prereq: 831-103 OR 831-107	S*	S
2	*607-170	2	AutoCAD for Construction Sciences[3,6]		S	S
2	*614-102	2	Construction Project Management 2[3]	Prereq: 607-136	S	S
2	*607-128	3	Construction Estimating[3]	Prereq: 804-135; Coreq: 801-136	S	S
2	*607-129	2	Future Trends Civil/Archi Tech[3]	Prereq: 607-104; 607-141; 607-169	S	S

What will you learn?

3	*607-148	1	Wood-Design & Detailing[3]	Prereq: 607-132	SU	SU
3	809-195	3	Economics[1]	Prereq: 838-105 OR 831-107	SU*	SU
3	*614-150	2	3D CAD: Building Information Modeling[3]		SU	SU
3	*607-187	2	3D CAD: Dig Terrain Model[3]		SU	SU
4	*607-134	2	Steel – Design and Detailing[3]	Prereq: 607-132	F	F
4	*614-108	1	Residential Code[3]	Prereq: 801-136	F	F
4	*614-110	3	Architectural Drafting – Residential[3]	Prereq: 614-150; Coreq: 614-108	F	F
4	*614-140	3	Mechanical Systems for Buildings[3]	Prereq: 607-104	F	F
4	809-198	3	Psychology, Introduction to[1,5,6]	Prereq: 838-105 OR 831-107	F*	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F*	F
5	*607-135	2	Reinforced Concrete-Design & Detailing[3]	Prereq: 607-132	S	S
5	*614-107	3	Residential and Commercial Inspection[3]	Prereq: 607-104; 614-108 ; Coreq: 614-114	S	S
5	*614-114	2	Commercial Code[3]	Prereq: 801-136	S	S
5	*614-115	3	Architectural Drafting – Commercial[3]	Prereq: 614-150; Coreq: 614-114	S	S
5	*614-123	1	Capstone: Architectural Structural Tech[3]	Prereq: 607-134 OR 614-100; Coreq: 614-115; 607-135 OR 614-101	S	S
5	*614-138	1	3D Modeling and Virtualization[3]	Prereq: 614-150; 607-187	S	S

Minimum Program Total Credits Required: 65

Interested in Getting Started Now?

In High School…

- Youth Apprenticeship
- Gateway Courses
  - Conflict Resolution in CET
  - Construction Basics
  - Building Materials & Construction Methods
  - Construction Estimating
  - Construction Project Management
  - Material Testing and Inspection
  - Surveying Basics
  - AutoCAD for Construction Sciences
  - 3D CAD: Digital Terrain Modeling
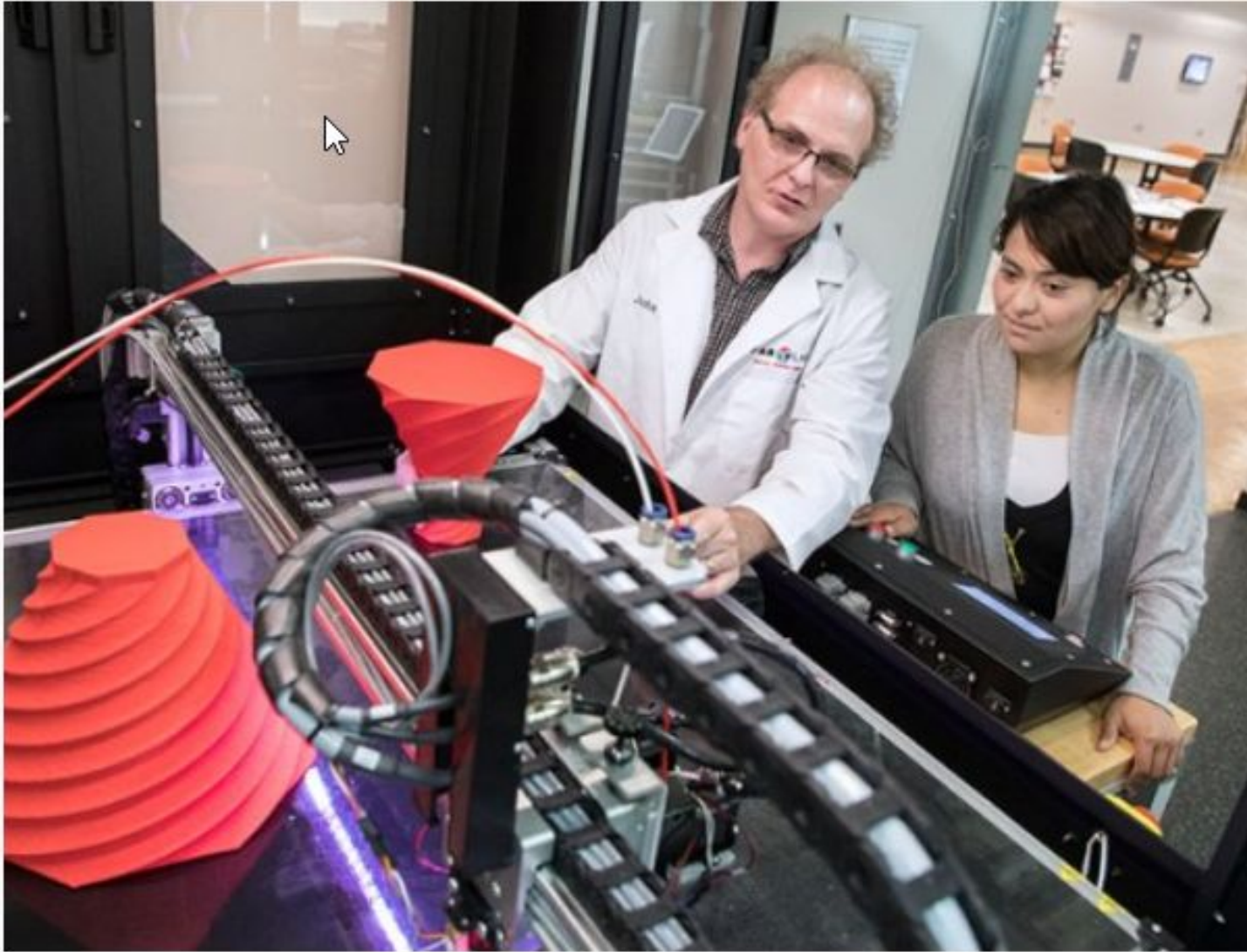 - 3D CAD: Building Information Modeling

EXPLORE!

Ready, set, create a building model

Directions

- Create account at SketchUp if you do not have one from your school

- Click on this link to take you to Sketchup lessons

- Watch the SketchUp Fundamentals Video

- Click on the lessons to learn how to use SketchUp

- Explore Sketchup

- If you create a design, be sure to share that with us! Send to Sam at ingos@gtc.edu

FAB Lab

What can you do in Gateway's FAB LAB?

Get creative in Gateway's Fab Lab! Hobbyists, tinkerers, engineers, artists, inventors and everyone in between are welcome to use the Fab Lab's 3D printers, vinyl cutter, milling machine, 3D scanner and laser engraver to manufacture nearly anything you can think of. If you can dream it, you can make it in the Fab Lab. From students developing a passion for STEM-related careers to industry professionals conceptualizing and designing products to artists designing incredible 3D art pieces, the Fab Lab is full of endless possibilities.

Gateway Fab Lab is designing, working on PPE and health care pieces to help front line workers

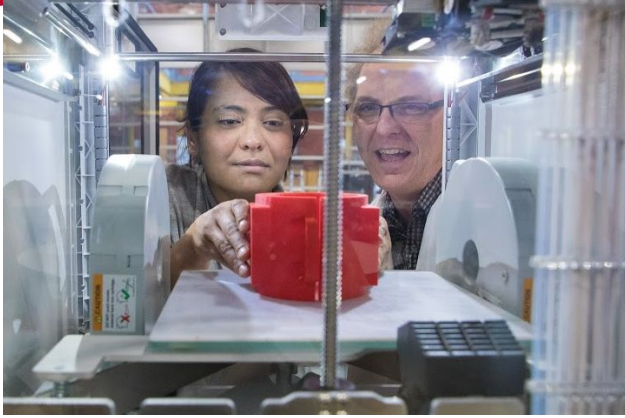One design being used by area nurses is an "ear saver," or surgical mask tension release band.

Hours

Monday - Friday
1PM -7PM

Events throughout the year:
Kids Lab - October
Ornament Workshop -
December
Guitar Workshop - February

Summer Camps

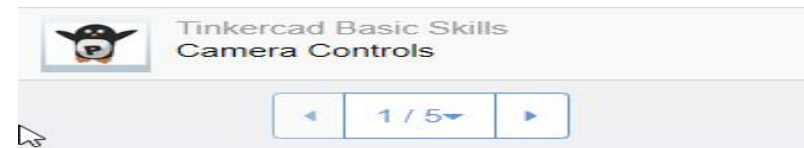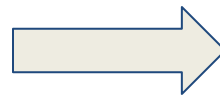OPEN FAB LAB TIMES for you and your parents to come in and use the 3D printers and laser cutters.

EXPLORE!
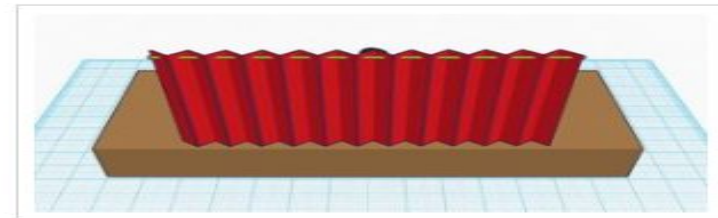
Ready Set….Design Something to to 3D Print

Directions

- Go to tinkercad.com
- Click on the ….
- Follow the LEARNING THE MOVES directions/lessons

Keep on Tinkering….

● Spend some time exploring on Tinkercad

● IF YOU MAKE A DESIGN, save your design to a USB

● Bring your USB during FAB Lab's Open Lab hours to create your masterpiece!
   ○ Mon - Fri
   ○ 1pm - 7pm
   ○ 2320 Renaissance Blvd. Sturtevant, WI 53177

2020 Summer Camps

- FAB LAB MAKER CAMP

- FAB LAB VIRTUAL REALITY DAY CAMP

- FAB LAB 3D PRINTER DAY CAMP