The University of Iowa

3D Design Program
In The Studio

3D Design Faculty will encourage you to experiment, using a wide range of materials and approaches, integrating theory and conceptual thinking with hands-on making.

The program values conceptual dexterity, sophisticated design, craftsmanship, the aesthetic quality of studio work and the meaning of social value. Intermediate and advanced courses involve intensive inquiry in furniture, hand built bicycles, objects, fabrication, modeling and materials.

The problems-based curriculum enables you to both investigate the critical questions facing designers and makers today, and develop the sophisticated skills required by changing technologies and new materials.

Our studio labs, some of the finest in North America, include Computer Modeling, Virtual Reality (VR), Computer Numerical Control (CNC) equipment including router, plasma-cutter, water jet, laser-cutter, thermoforming and Rapid Prototyping (RP).

The “Iowa Idea” permeates the study of 3D design, wherein studio art, art history, and more broadly science and the humanities, are woven.
We intended for this to be a welcoming space, encouraging visitors to relax and absorb the installation. The scene is asymmetric and irregular to represent the non-conformities found in nature. The larger, grounded structures house examples of student work. Their framework doubles as protective coverage as well as a unique display system. The booth is designed to be a collapsible structure made up of solids, lines and volumes: the foundational elements in design.

The University of Iowa won first place in the juried competition SOFA CONNECT among design schools for the second year.
About SOFA

“The Sculpture Objects Functional Art + Design (SOFA) Fair in Chicago is the premier gallery-presented art fair dedicated to three-dimensional art and design. On par with Art Basel and TEFAF Maastricht, SOFA is produced by Urban Expositions.

SOFA is held annually in the fall at Chicago’s major destination, Navy Pier, with an average of 80 dealers and 35,000 people attending. Sales at the fair are estimated at 15-20 million dollars per show.

SOFA CONNECT offers students, working under the supervision of faculty, the opportunity to create a 576-square foot environment that incorporates seating, lighting and objects, located throughout SOFA CHICAGO with the intention of offering an intimate space where attendees can sit, relax and CONNECT. The international audience that attends SOFA CHICAGO is able to get an up-close and personal look at the innovation and creativity that is currently taking place at some of the country’s top design schools.

SOFA has evolved into a dynamic international marketplace and community – a confluence of perspectives where art, design and people intersect” according to. http://www.sofaexpo.com/AboutUs.htm

Winning Team

UNIVERSITY OF IOWA 3D DESIGN

name from the left
Sarah Gutowski, Elissa Opfer, Yingjie Chen, Justin Bailey, Monica Correia (Instructor), Yi Xie, Vako Darjania, Breeana Jones Glenn, Magen Krones, Darcy McBride, Yixin Chu, Lucas Ingram and Alex Castles
While in constant experimentation, my work lies on fundamental design principles that create statements based on their literal presence. Visual design elements such as lines are manipulated using the latest computer-aided design technology, enabling me to embrace tradition and innovation at the same time. My research venues involve Furniture, Products, Interiors, Virtual Reality and Human-Computer Interaction.

Vinicius Lima

SPAN TABLE & STREET AND PLAZA TABLE

The petite Legato End Table draws its long lines and subtle curves from stretched and flowing notes of music. Curves in profile of the legs extend into the smooth formed surface of the Corian drawer fronts, creating lips for ergonomic handles.

Justin Bailey

LEGATO SIDE TABLE
The table set get is name from Lunar craters, specifically from “Clavius” crater where five distinct craters appear within one large crater. The three circular holes in the table fit matching concrete planters, building a unique interaction between plants and daily life through the medium of furniture. The stool uses similar circles to hold a felt pad that fits over them to create a more comfortable and sustainable seating element. Made from Birch Plywood, Concrete and Wool Felt.

Vako Darjania

LUNA COFFEE TABLE AND STOOL

Beginning as an exploration of surfaces and lines this coffee table quickly became a study in applying an exaggerated kerf-type bend to solid wood board. As it developed, Kerfed took notes from plane wings to create a surface that stretches the expanse of a sofa for a functional coffee table, but still provides an openness to the overall space of the interior.

Justin Bailey

KERFED
The Chinese Table is a furniture piece that combines sitting, serving and storage in one. The inspiration came from the traditional Chinese bench, which is usually made from hard wood and used as a couch and bed.

Yi Xie

CHINESE TABLE

Yiwen Chu

RUMINATION

Oriental styled coffee table. Can be disassembled.
The Ballerina stool gets its name from the point shoe of ballet dancers, a silhouette used for the foot of the stool, allowing for easy stacking of multiple stools. The stool uses two types of bamboo plywood to create contrast between the seat and the legs, and is also a sustainable material.

Yingjie Chen

STITCHED TABLE

A flat packing coffee table that uses nylon rope to hold together the two halves of a foldable top. The table uses two different types of bamboo plywood to create contrast between the top surface and the legs.

Yingjie Chen

BALLERINA STOOL
Standing coat rack that packs flat.

Yiwen Chu

CATCH

Taking influence from the garments it holds, the Cinched Coat Rack pulls in at its waist to create a tripod base on the bottom and hangers at varying heights above. The red creates a shot of color radiating from within the clothing the holders collect as the rack fills, adding energy and warmth to the surrounding space. Disassembles for shipping and storage.

Justin Bailey

CINCHED COAT RACK
The act of stretching inspired the shapes of this flat packing coat rack. Height is a necessity for a coat rack to keep garments from dragging on the floor, for Yingjie, stretching was a very natural relation to height. With feet below and extended arms above the coat rack has four hangers in addition to rope stretching across one arm to collect scarves and other small pieces of clothing. Made from sustainable bamboo plywood.

Yingjie Chen
STRETCH COAT RACK

The Tension Chair receives its name from the rope to create the seat and back-rest of the chair. The chair utilizes movement within the bamboo plywood frame and the stringing of the nylon rope to create lines that draw they eye throughout the whole piece. Dimensions are 21” x 22” x 32”

Yingjie Chen
TENSION CHAIR
The Sparrow chair was designed to integrate the aluminum framing within the bamboo to unite the materials working as a more cohesive unit while maintaining a strong and thin profile. The individual seated parts, with their placement and angles, contours with the body and promotes proper posture and support. Perfect for as a dinette set or casual seating for gatherings and meetings.

Stemming from a concept interior design for The Airliner, a local restaurant, this chair prototype maintains the theme of the space, intending to be lightweight and created using a framework structure reminiscent to the aesthetic of early planes. The chair is also collapsible for easy shipping and storage.

The side profiles are a sandwich of powder coated steel and plywood. A canvas covering stretches between the two profiles to create the seat and back.
This is a set of children’s furniture designed to stimulate creative and imaginative play. The series includes a Carriage Desk, All-in-One desk and Coat Rack. A 3” color-changing LED orb is added as a fun accessory to tie the pieces together. While being fun for kids, the set also adds ease of mind to adults because everything is assembled without tools and easily packs flat for storage.

Allison Holden

CHILDREN’S FURNITURE

The Cathedra Chair brings a style and comfort for those relaxing moments of sharing in conversation and great wine. The chair is made of sustainable materials, ¾” bamboo ply and ¾” recycled HDPE plastic. It was developed using CNC (computer numerical control) technologies and assembles with slice form methodology, without the use of hardware and tools.

Chuck Romans

CATHEDRA CHAIR
The inspiration for this chair comes from a common punctuation mark, the comma sign. The ‘comma’ means life pauses for a moment, or could even be treated as a new start. The design seeks to create a relaxing area for someone to enjoy a beverage and take a break. Using soft curved lines and round shapes, Yi Xie attempted to use as few pieces as possible to reduce the weight and waste of material.

Yi Xie  
COCKTAIL FURNITURE

Designed and manufactured completely using CAD technology, the Boomerang chair becomes an object to be produced in larger scale without having too many production errors. Its seat and backrest are made out of two sheets in a shallow angle, defining a concave area for comfort, less waste of material and a smaller package. Built out of bamboo plywood, the parts are cut, lightly sanded and receive a clear coat of polyurethane for protection, keeping its original color.

Vinicius Lima  
BOOMERANG CHAIR
The inspiration for this chair comes from asymmetrical shapes.

This chair was designed and manufactured with Computer Aided Design using bamboo plywood, leather and aluminum parts.
"Nest" is a chair constructed with birch plywood. The soft tentacles are made out of felt and filled with polyester.

The inspiration for this chair came from a radio tower. I wanted to create a chair that was small enough to be a kids chair, yet large enough for an adult to comfortably sit on. It was made by creating an AutoCAD file and then sending that file to a CNC router to be cut.

The material I used was FORESCOLOR which is a newer material that is artificially colored form of MDF.
ChairONE can be assembled without using any tools. It’s made out of sustainable material, recycled High-density polyethylene plastic sheet and Birch plywood. The series also features a desk which also uses the wheels seen on the chair so that the pieces can be rearranged with ease.

Johnny Chan
ChairONE

Inspired by the early cantilever designs first seen in the 1920’s, this design incorporates wood to evoke the look and feel of fabric or leather. The walnut wraps and stretches across tubular steel to create a simple, elegant form.

Eric Asche
CANTILEVER CHAIR
This wood and steel frame liquor cabinet reaches counter top height so that users can comfortably prepare their favorite drink on top while storing glasses, bottles and accessories below. Openings on the sides hold bottles upright with small storage drawers below.

Elissa Opfer
LIQUOR TABLE

The idea for the Apotheosis lounge chair stemmed from a passion for an elegant combination of structure and form. The balance of steel beams and Zebrawood juxtaposed by white leather upholstery creates a beautiful composition for the viewer. The soft leather covers the perfect amount of cushioned space for a luxurious seating experience.

Todd Hahn
APOTHEOSIS LOUNGE CHAIR
ABOUT FURNITURE LIGHTING OBJECTS INTERIOR
The Flip Light is an interactive night light that turns on and off by flipping the whole lamp upside-down. The Battery powered LED allows it to be a portable night light that is reminiscent of a typical flashlight in its form. Made from Walnut, 3D Printed Plastic and an LED light source.

Yingjie Chen
FLIP LIGHT

This lamp was inspired by bioluminescent jellyfish that reside deep in the ocean. When lit, each strand glows softly, punctuated by a pinpoint of light at its tip. The subdued nature of the light makes it ideal for dark and intimate settings. 350 strands of fiber optic wire are threaded through two acrylic rings to create the filament shade. The body is constructed from laser-cut walnut.

Sarah Gutowski
FILAMENT LAMP
The Geometric Lamp is inspired by the iceberg in the sea. The sharp edges are related to the shape of the iceberg. You can change the light bulb by simply removing the whitened piece from the base. The black base of the lamp is 3D printed with powder, and coated with the finish spray. It was modeled with 3ds Max, and the top piece is made out of white yupo.

Sarah Gutowski
SILVER LININGS

The Silver Linings lamps are made from 3mm laser-cut birch plywood. The CNC laser was used to make relief cuts, allowing the shade to bend into a cone. Light shines through the relief cuts, casting dramatic linear shadows against intermittent lines of light.

Joan Kim
FILAMENT LAMP
The lamp was inspired by the ancient sea creatures with shells. The organic form is a made out of four shapes that are slightly angled from one another. The lamp is 3D printed in powder and coated with the finishing spray paint for protection. The small piece that is holding the LED strip cord is 3D printed in ABS plastic and embedded in the lamp for stability.

The Polyp Lamps are a sustainable light source made from post consumer paper bonded with PVA adhesive with an LED Light. The Table lamp version uses a 3D printed base fixture. The Polyp lamp form is inspired by coral polyps on the ocean floor and intend to bring an organic element into the highly structured human habitat.
HU-HU is a table lamp that can be used in a bedroom or living room. HU-HU means the sounds of wind blowing; it is also my inspiration for this project. I was using a software named 3D Studio Max to designed it and produced it by a 3D High-Performance Composite Printer.

Lamp inspired from Roy Lichtenstein benday dots. The form of the lamp is to challenge the perception of a vision and to invite people to explore.

Youtian Duan

Vako
Nodding lamp is designed for an office desk. The lampshade has the ability to tilt up and down to point the light to desired directions and it is that up and down motions that gives the lamp the name of Nodding lamp.

Lunar Light is a movable desk lamp which is made from sustainable materials. Lunar Light showcases the beauty of simple geometry. With the mild light going through the dainty horizontal cylinder the user can enjoy the soft and romantic atmosphere the Lunar Light provides.
The Efflorescence Lamp was inspired by the malleable nature of paper. This blossoming arrangement is constructed from a recycled paper called Yupo. The strips are laser cut with tabs on the ends that plug into a 3D printed fixture. The fixture was designed using a 3D modeling software and then printed in ABS plastic. Within the fixture is a removable device that allows for changing the light bulb.

Hailey Kurtz

EFFLORESCENCE LAMP

This is a prototype of a lamp designed using 3D Studio Max. The goal was to design an ambient desk lamp using repetition of a torus shape. The prototype was created using a ZCorp 3D powder printer and a color-changing LED puck light.

Allison Holden

ARRAY LAMP
Tessellamp is produced from two sustainable materials. SFI Certified birch plywood for the base of the lamp and Yupo paper for the lamp shade. The base of the lamp is adjustable in height by inserting or taking out each of the diamond shaped pieces. The lamp shade can also be added on to or reduced, made from strips of Yupo paper that have been scored by a CNC die-cutter and then folded. The strips of the paper creating the shade are joined using a tab system that allows for simple assembly.

The Cathedra Lamp is a floor lamp designed to focus light for reading or seated activity. The base of the light is made from sustainable HDPE Black Plastic and bamboo plywood while the top uses a 3D printed shade holder and a thermoformed plastic shade to hold an LED light source. The design packs flat and uses slot and tab design for easy assembly.
ABOUT LIGHTING FURNITURE OBJECTS INTERIOR
The Flabellum Clock was inspired from the mid-century modern starburst clocks. I was intrigued by their energetic and three-dimensional nature. The Flabellum Clock reflects these characteristics with an array of expanding segments that align with the minutes of an analog clock. The design was created using AutoCAD. The structure is made from laser cut basswood and plasma cut aluminum. From there, I then glued, hand bent, and assembled the remaining structure.

Hailey Kurtz
FLABELLUM CLOCK

This curvilinear series consists of a full figured vase and candle holder. The embracing shapes intertwine to resemble maternal gestures which served as the inspiration for this series. The negative surface exposes the interior which features bright colors to contrast the stark whiteness on the exterior. These vessels were accomplished with the use of 3D modeling software and a 3D powder printer.

Hailey Kurtz
WOMB SERIES
This tactile set of salt and pepper shakers allows users to differentiate their salt and pepper not just by color, but also by touch. The small set features opposing stippling textures that wrap and fade around the surface of the shaker, salt forming bumps and pepper forming divots.

Justin Bailey
TACTILE SALT AND PEPPER SHAKER SET

I designed these shakers with the intention of nesting the smaller (salt) shaker underneath the more masculine (pepper) shaker.

Krystal Rudick
SALT AND PEPPER SHAKER
The idea of this project came from iceberg forms.

Yiran Li
HUG

Elissa Opfer
SALT AND PEPPER SHAKER

An integrated salt and pepper shaker, the two spices are connected in a curved form that is elegant and balanced on the table. The two halves are 3D Printed in metal in two different steel finishes, and are connected by a third piece at the center that also allows the two sides to be filled.
CEREBB

Ceramic vase that is ideal for wide range of flowers.

DESK ORGANIZERS

The set of organizers can handle any clutter that your desk can’t handle.
The vase design is very simple - the configuration is straight lines, but the base (resin) tilts and makes an angle, which creates an interesting visual effect. By combining wood and a rough resin material, the vase has a sustainable yet industrial look. The straight lines create the first “L” in the set.

The tray uses materials - a white steel plate can serve small amount of food and a 3D printed bowl is inserted in between the steel and wood, which could be used for soup or dip. The wood board has slots to assist cutting the bread and cheese as well as preventing the food from sliding, every visual element has a function. The candle holder is a puzzle held together by magnets that can be disassembled to hold different sizes of candles depending on the user's needs.
Perfect for a party, the Triple Goddess plates will hold your wine so you can eat, drink, and rule the room at the same time. The design is inspired from the three-armed, spiral symbol of the triple goddess, which represents three stages in the female life cycle. The Goddess serving tray is a companion piece to the Goddess appetizer plates. The appetizer plates can nest along the curved edge of the tray, and the rest of the surface can be used to get the party started. Each tray is constructed from laser-cut oak plywood and treated with food-safe mineral oil.

The Terra Serving Tray uses topographic contour line to divide its serving space in a unique way for appetizers of any kind. The three lowest depressions provide enough space to serve multiple items close together, but properly separated. The top level has space for one of a kind sauce/dip bowls and spreading knives.
Matthew Hazen's concept was to design a tray with a ring to better carry glasses, wine glasses in particular. The tray is made entirely of oak and measures approximately 18" in length.

Matthew Hazen

WINE TRAY

The Petal tray is a wine tray perfect for four people. The idea for the tray was to design a wine tray that is not so traditional in its function. Placing the tray on top of the bottle gives one the ability to carry the tray with one hand by the bottle giving the ability to use the other hand to hand out the wineglasses and the coasters.

Vako

PETAL TRAY
This elongated tray was made to be secure and ergonomic for easy carrying. A hole for the thumb allows the tray to rest on the user’s forearm while holding. Elevated elements of the tray secure the bottle, glasses and two coasters in place so that it can be lifted easily even after the a night of enjoying the tray and its contents.

Derek Thatcher

WINE TRAY FOR TWO

The 4.2 Wine Tray is designed for 2 people to enjoy wine. By pulling out one of the handles, you can fit 2 wine bottles on the tray. The tray is cut with the CNC machine and made out of walnut wood.

Joan Kim

4.2 WINE TRAY
This bowl was designed to hold fruit, bread, or even wine bottles! It started as a flat metal sheet, then plasma cut into a design where it was then folded and powder coated to become food safe. My inspiration was based off some of my previous work which displayed triangular cuts taken out of a square/rectangle.

Krystal Rudick

KINSLEY BOWL

Peak Bowl is a fruit bowl that has three distinct compartments to separate the contents. The bowl is made of 16 gage steel and is manufactured by a (Computer Numeric Control) CNC Plasma cutter. Bent by hand and powder coated with food safe finish to make it consumer ready. Peak Bowl also comes in a smaller size ideal for nuts and candy.

Vako

PEAKBOWL
For the three bowls my goal was to make a form that would stand on unusual surfaces. All three of these bowls stand in a unique way that creates visual interest. They are all abstract and asymmetrical, using triangles to create the forms.

Joan Kim

STRIP OF A BOWL

The fruit bowl came from the idea of folding papers. The unfolded shape of the bowl is a flat rectangle, so it is easy to manufacture with the least amount of waste of the material. It is laser cut and finished with food-safe powder coating.

Elissa Opfer

FRUIT BOWL
This terrifying toy spider was created using Leonar3Do computer modeling software. The software models in 3D virtual space using a tool called a bird which moves in 3D space as opposed to the standard mouse that is limited to a two dimensional plane. Four of the spider’s eight feet are a ball entrapped in a claw allowing the toy spider to roll towards its next victim.

Justin Bailey

ROLLING SPIDER

LaHmos is a moveable, 3D printed character. One of Tunde’s many imaginary creatures that first appeared in watercolor paintings four years prior. Since then she has been using their world as an inspiration to create sculptures and virtual 3D models.

Tunde Horvath

LAHMOS CHARACTER
ABOUT
FURNITURE
LIGHTING
OBJECTS
INTERIOR
Wood and neutral tones create an intimate yet open futuristic dining space. Featuring soft curves and contrasting solid and lattice forms, the restaurant’s dining spaces create movement throughout but add some privacy to each visitor’s experience.

Justin chose to keep the restaurant’s existing name, using it as impetus for a design that is light, open and exposed, looking back to the origins of flight and planes.

The Airliner is an update of a residing restaurant in Iowa City. Located in the city’s downtown area, the existing space is narrow yet tall.
Yiwen Chu

MOOD FLOW CHINESE RESTAURANT

Chinese styled restaurant with tea ceremony front place at the second floor. 120 capacity.

Breeana Jones Glenn

ROCCIO RESTAURANT DESIGN

A faceted, highly structured exterior reveals a passionate scheme of red, black and white inside of this upscale Italian restaurant design. The restaurant features two levels of dining as well as a small bar on the first floor. Modeled and rendered in 3DS Max.
Fog Bank is a space designed for meditation. Fit within a 50’ by 50’ lot, the space creates a shelter that allows visitors a chance to enter into the structure to relax and take in their surroundings.

Justin Bailey
FOG BANK PAVILION

The idea of this project comes from iceberg shapes.

Yiran Li
ICEBERG BOOTH

The idea of this project comes from iceberg shapes.
Design for an exhibition of objects to be on display in the booth. The space is made up of stacked boxes at varying levels to create archways and stairs to a second floor lookout where exhibition visitors can have a short break from the rest of the show and a bird’s eye view. Modeled and rendered in 3DS Max.

Sarah Gutowski
EXHIBITION BOOTH DESIGN

Concept Exhibition Design for the The University of Iowa 3D Design program to featuring furniture and object design. The form derived from an unfolded truncated octahedron, an Archimedean Solid, harkening back to the foundation design courses offered in design and the basic building blocks that we start with and continue to inform design.

Justin Bailey
TRUNCATED EXHIBITION BOOTH
Concept Exhibition Space for the University of Iowa 3D Design program to feature furniture and object design. The form derived from organic curved surfaces, with the use of Grasshopper, the modular pattern is embedded to the surface to make it look dynamic.

Yingjie Chen

EXHIBITION BOOTH DESIGN

Yiwen Chu

DESIGN BOOTH

Booth concept for 3D design group exhibition space.
This is a space designed for a bookstore booth in which a color palette should be emphasized. The inspiration for the design came from paint tubes or containers that when open, reveal the magic effects of color. Therefore every requested space is inside a container which has its own color. Every object and furniture also matches the same color of the container creating monochromatic rooms within a multicolored space. The signage of the space was also designed after the paint labels with big bold letters showing what is the functions of each container. A sculptural yellow element works as a sculptural element to call the visitors attention among all the other options available at the event.

CONTAINERS OF FUNCTION FILLED WITH COLOR INSIDE

Vinicius Lima

Wire is a design for a new restaurant in which the building virtually disappears. The structure loses its boundaries with the outside, becoming completely transparent, from floor to ceilings, including furniture, silverware and even the bathroom. In that way, what really stands out are the clients, who go to this fine establishment to see and to be seen by the people inside and outside. The shape of the massing, with very sharp edges and glazed from head to toe, creates a unique appearance in its surroundings. The building has three and a half levels, having the restaurant housed in the first two. The third level and the mezzanine house a night club, where people can go dancing and appreciate the night scenery and lights.

Vinicius Lima

WIRE
The booth, Lumens + Lines, creates a theatrical, staged environment to showcase design and connect with fair visitors. The lighting done in collaboration with the University of Iowa Theatre Arts Students cycles through all four seasons featuring each season from morning until night before changing to colors reminiscent of the next season and time of day. The light streams through an abstracted forest canopy onto the landscape below where it washes a pure white, soft seating areas with color.

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We intended for this to be a welcoming space, encouraging visitors to relax and absorb the installation. The scene is asymmetric and irregular to represent the non-conformities found in nature. The larger, grounded structures house examples of student work. Their framework doubles as protective coverage as well as a unique display system. The booth is designed to be a collapsible structure made up of solids, lines and volumes: the foundational elements in design.

The inspiration for the design came from Leonardo da Vinci’s drawing “Storm over a Valley in the Foothills of the Alps”. This drawing features the three natural forces of Earth, Water and Wind. Although these three forces are still present in our everyday lives, we chose to modernize the idea to include the latest addition to our nature: technology.