

Engineering, College of, Senior Design Clinic Project Files

Ward M. Canaday Center for Special Collections

Follow this and additional works at: <http://utdr.utoledo.edu/finding-aids>

This Finding Aid is brought to you for free and open access by the Ward M. Canaday Center: University Archives at The University of Toledo Digital Repository. It has been accepted for inclusion in Finding Aids by an authorized administrator of The University of Toledo Digital Repository. For more information, please see the repository's [About page](#).

**UNIVERSITY OF TOLEDO ARCHIVES
ACCESSION RECORD SHEET**

Accession Number: UR 03/16

Date Received: 6-12-03

Received From (Dept. and Person): Christine Smallman, College of Engineering

Record Division: University Records

Record Group or Collection Name: College of Engineering

Record Series (for UR only): Senior Design Clinic project files

Quantity: 6 lin.ft.

Dates: 1997-2002

Condition: Good

Access: Open

Location: R 14/S C

Description: (Includes arrangement, types of material, subjects covered, etc.)

Series contains project reports from the University of Toledo College of Engineering's Mechanical, Industrial, and Manufacturing Engineering Department Senior Design Clinic. The files are arranged chronologically and then numerically by project number.

The Senior Design Clinic is a collaboration of the M.I.M.E. department and local industries. The clinic was designed as a capstone course under the title of Synthesis I and II, and changed its name to Senior Design Clinic in 1997. In the clinic, students work in teams using knowledge gained from previous courses to solve real world engineering design challenges. Local industries provide an engineering project challenge, along with technical and financial support. The industries seek a solution to a specific engineering project relevant to their organization.

Many of the projects involve improving accessibility for the disabled.

Accessioned by: C. Smallman

Date: 6-17-03

CONTENTS

	BOX	FILE
Formula SAE suspension, 1997	1	1
Jar opener, 1997	1	2
Production expansion model, 1997	1	3
Pool chair lift, 1998	1	4
Porch lift, 1998	1	5
End cap closure, 1998	1	6
Quick changeover, 1998	1	7
Shredder system productivity, 1998	1	8
Baler system, 1998	1	9
Laser automation, 1998	1	10
Engine testing, 1998	1	11
Tablet punch design, 1998	1	12
Paint spray gun, 1998	1	13
Dishwasher door counter balance, 1998	1	14
Finite element analysis of strike plate, 1998	1	15
Portable fire extinguisher trainer, 1998	1	16
Personal sauna, 1998	1	17
Conversion efficiency of a cogeneration system, 1999	1	18
Smart basketball hoop for visually impaired, 1999	1	19
Material handling system for windshields, 1999	1	20
Quick change of master unit die tools, 1998	1	21
Inspection device, application and location of gaskets, 1999	1	22
Redesign of food packaging, 1999	1	23
Yard optimization and reorganization, 1999	1	24
Formula SAE car, 1999	1	25
Service department and yard analysis, 1999	1	26
Flammable liquid storage, 1999	1	27
Quick changeover for extrusion line, 1999	1	28
Rising production to improve efficiency, 1999	1	29
Mack single fuel filter, 1999	2	1
Revise material handling process, 1999	2	2
Productivity analysis of "on the hill," 1999	2	3
Improvement of non-ferrous separating, 1999	2	4
Pick-up truck loading and unloading devise, 2000	2	5
Fatigue life of high performance clutch springs, 2000	2	6
Transfer and stamping line using OBI presses, 2000	2	7
Formula SAE car, 2000	2	8
Redesign manufacturing packaging, 2000	2	9
Racing wheelchair, 2000	2	10
Safety precautions for wheelchair porch lift, 2000	2	11
Flock adhesive applications procedures, 2000	2	12

Spin on lube filter, 2000	2	13
Wet shredder process analysis, 2000	2	14
Diaphragm clutch springs, 2000	2	15
Hoist mechanism for logs for disabled farmer, 2000	2	16
Drilling fixture for disabled mushroom farmer, 2000	2	17
Redesign of racing wheelchair seat, 2000	2	18
Wheelchair garage lift, 2000	2	19
Inverted shielded Y-tube rocker, 2000	2	20
Part handling for laser weld line, 2000	3	1
GMT830 process line redesign, 2000	3	2
Microvent installation, 2001	3	3
Design sampling devise to remove resin, 2001	3	4
Ready to assemble furniture assembly time, 2001	3	5
Universal rickshaw exercise machine, 2001	3	6
Microgravity simulator machine, 2001	3	7
Foldable commode/shower chair, 2001	3	8
Travel trailer wheelchair lift, 2001	3	9
Modification of rowing chair, 2001	3	10
Modification of power wheelchair for racing, 2001	3	11
Heavy duty oil filter with oil conditioning, 2001	3	12
Rocket roadster, 2001	3	13
Preventative maintenance system, 2001	3	14
Cost reduction of Ford Escape driveshaft, 2001	3	15
Qualitative test, PBT bearing retainer, 2001	3	16
Universal joint angle measurement system, 2001	3	17
Denture manufacturing press redevelopment, 2001	3	18
Wheelchair wheel wash system, 2001	3	19
Mobile elevating unit for computer tower, 2001	3	20
Manual racing wheelchair, 2001	3	21
Power wheelchair for leg exercise, 2001	3	22
Water hydration, disabled mushroom farmer, 2001	3	23
Wheelchair garage access system, 2001	3	24
Kinematics simulation, plastic bottle molding, 2001	3	25
HVAC evaluation, Performing Arts Center, 2001	4	1
Formula SAE car, 2001	4	2
Hardness index for pharmaceutical tablets, 2001	4	3
Kitchen and bathroom wheelchair access, 2002	4	4
Posterior class 2L racing wheelchair, 2002	4	5
Racing wheelchair, 2002	4	6
Automatic fishing rod and reel, 2002	4	7
Beach wheelchair, 2002	4	8
Power wheelchair with cardiovascular enhancement, 2002	4	9
Power wheelchair with drain valve, 2002	4	10
Wheelchair for hunting, 2002	4	11
Angelic iron, 2002	4	12
Tissue testing machine, 2002	4	13

Preform post-mold cooling system, 2002	4	14
Universal joint angle measurement system, 2002	4	15
Pneumatic head for grinding kinematics machine, 2002	4	16
Alternative uses for glass fibers, 2002	4	17
Medium adult racing wheelchair, 2002	5	1
Modification of racing wheelchair, 2002	5	2
Farm tractor access system, 2002	5	3
Farm tractor steering and control, 2002	5	4
Wheelchair lift for mobile home, 2002	5	5
Bed and shower lift assist, 2002	5	6
Wheelchair treadmill, 2002	5	7
Modification of drive side seat, 2002	5	8
Falling needle/ball viscometer, 2002	5	9
J-clip error proof installation method, 2002	5	10
Downtime and defect database tracking, 2002	5	11
New mold design for tire forming operation, 2002	5	12
Bathtub seat apparatus, 2002	5	13
Sledge hockey sled, 2002	5	14
Automatic fishing rod and reel, 2002	5	15
Stair lift, 2002	5	16
Adaptation of riding lawnmower, 2002	5	17
Alternative air pressure mattress, 2002	5	18
Fluid dispenser, 2002	5	19
Farm tractor access system, 2002	5	20
Cardiovascular enhanced power wheelchair, 2002	5	21
Kitchen and bathroom wheelchair access system, 2002	5	22
Beach wheelchair, 2002	5	23
J-clip error proof installation method, 2002	5	24
Idle staged dampers, two plate clutches, 2002	5	25
Carton piece picking, 2002	5	26
Laser welding line improvement, 2002	5	27
Hair/biological tissue testing system, 2002	5	28
Keypad docking mechanism, 2002	5	29
Medium adult racing wheelchair, 2002	6	1
Modification of racing wheelchair, 2002	6	2
Farm tractor access system, 2002	6	3
Farm tractor steering and control, 2002	6	4
Wheelchair lift for mobile home, 2002	6	5
Bed and shower lift assist, 2002	6	6
Wheelchair treadmill, 2002	6	7
Modification of driver side seat, 2002	6	8
Falling needle/ball viscometer, 2002	6	9
J-clip error proof installation, 2002	6	10
Downtime and defect database tracking, 2002	6	11
New mold design for tire forming operation, 2002	6	12
Bathtub seat apparatus, 2002	6	13

Formula SAE car, 2002	6	14
MIME Department Senior Design Clinic, 1997-2005	6	15