

Mec E 468 Numerical Simulation in Mechanical Engineering Design

AUTOMARK REPORT

Semester: Win 2022

Instructor: Prof. David S. Nobes

Student Name:

Assignment: Assignment No 1

PROCESSING DATE: July 5, 2022

AUTOMark Assessment Grade: 686 out of 727

AUTOMark Recommended Grade: 94 out of 100

NOTE: This grade is preliminary only and needs to be confirmed.

The following pages include each of the drawings in the following order:

- Your submission
- Your submission marked by AutoMARK
- The solution

Other important points:

- Examples are given on eClass of how to interpret the mark-up symbols used by AUTOMark.
- If you have any questions, discuss with your TA in the next lab time.

DRAWING CREATION DATE: 28-Sep-2010 08:59:34

DRAWING LAST SAVE DATE: 30-Jun-2022 10:48:09

MODEL CREATION DATE: 23-Sep-2010 11:25:48

MODEL LAST SAVE DATE: 30-Jun-2022 10:48:09

AutoMARK details:

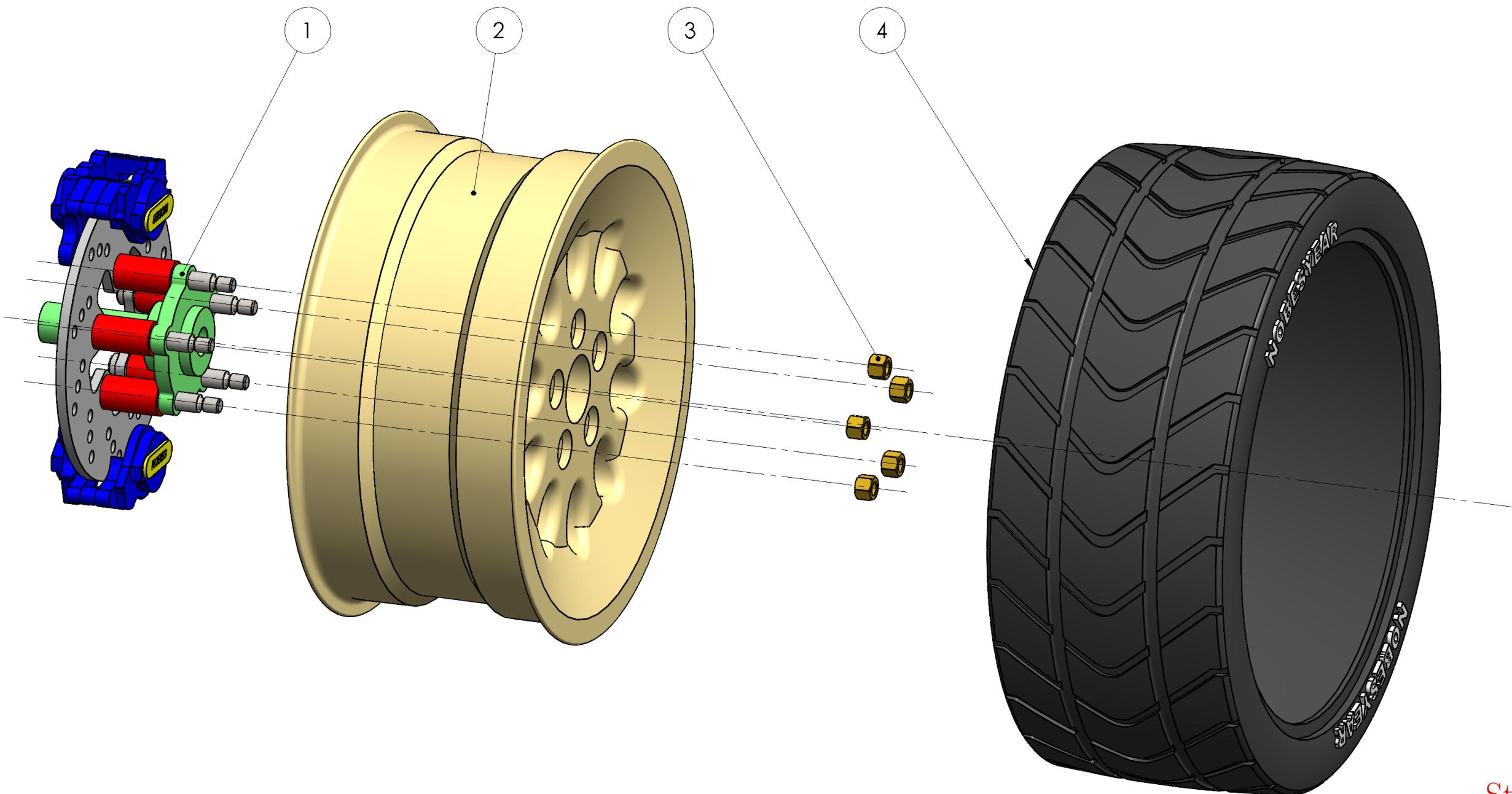
- Sheetnames should contain only alphabetical characters
- Weights of feature properties are set by the marker
- AutoMARK v 4.0 software written and designed by Owen Stadlwieser

AutoMARK Criterion (The weights of these criterion are decided by the marker):

- DRAWING: SheetOrder, ExtraSheets
- SHEET: SheetPaperSize, SheetScale, SheetTemplate, SheetExtraBOMS, SheetExtraViews, SheetViewTypes, SheetIntersectingBalloons
- BILLOFMATERIALS: BOMTableType, BOMNumberColumns, BOMNumberRows, BOMPosition, BOMTableHeight, BOMTableWidth, BOMFontType, BOMFontSize
- VIEW: ViewScale, ViewDisplayStyle, ViewExtraDimension, ViewPosition, ViewExtraCenterMarks, ViewMass, ViewMaterial, ViewExtraDatums, ViewWrongProjection, ViewExtraCenterlines
- DIMENSION: DimensionDangling, DimensionWrongView, DimensionPosition, DimensionArrowSide, DimensionValue, DimensionBadText
- CENTERLINE: CenterlineDangling, CenterlinePosition
- CENTERMARK: CentermarkDangling, CentermarkPosition, CentermarkShowlines, CentermarkAngle, CentermarkConnectionLines, CentermarkExtensions, CentermarkGap, CentermarkSize, CentermarkGroupedCorrectly
- DATUM: DatumDangling, DatumWrongView, DatumPosition, DatumLabel, DatumDisplayStyle, DatumFilledTriangle
- Balloon: BalloonDangling, BalloonPosition

<i>Symbol/Colour</i>	<i>Meaning</i>
✓	No deductions on feature
Colour	Incorrect value
Colour	Miscellaneous error
Colour	Incorrect Position
Colour	Unrecognized feature
Colour	Missing feature
?	Feature not found on key

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



Student Submission

MecE 265	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: $\pm 0.5^\circ$ LINEAR $X = \pm 0.5$ $X.X = \pm 0.1$ $XXX = \pm 0.025$	DRAWN BY: David S. Nobes
Instructor: Dr DS Nobes Fall 2021	Comments:	Lab Day ALL
		SM By D.S.Nobes
		TA Initials DSN
		zacha June 30, 2022 10:48:09 AM September 23, 2010 11:25:48 AM
MATERIAL: Various	SURFACE FINISH $0.6 \mu\text{m}$	DO NOT SCALE DRAWING
FILE NAME: MecE265_Car_Hub_Rim_Tire	Assignment Number Assignment 03	
SIZE B	REV 2	SCALE: 1:4 Mass: 175308.62 SHEET 1 OF 3

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

TITLE:
**Hub, Rim, Tire
Assembly**

8

7

6

5

4

3

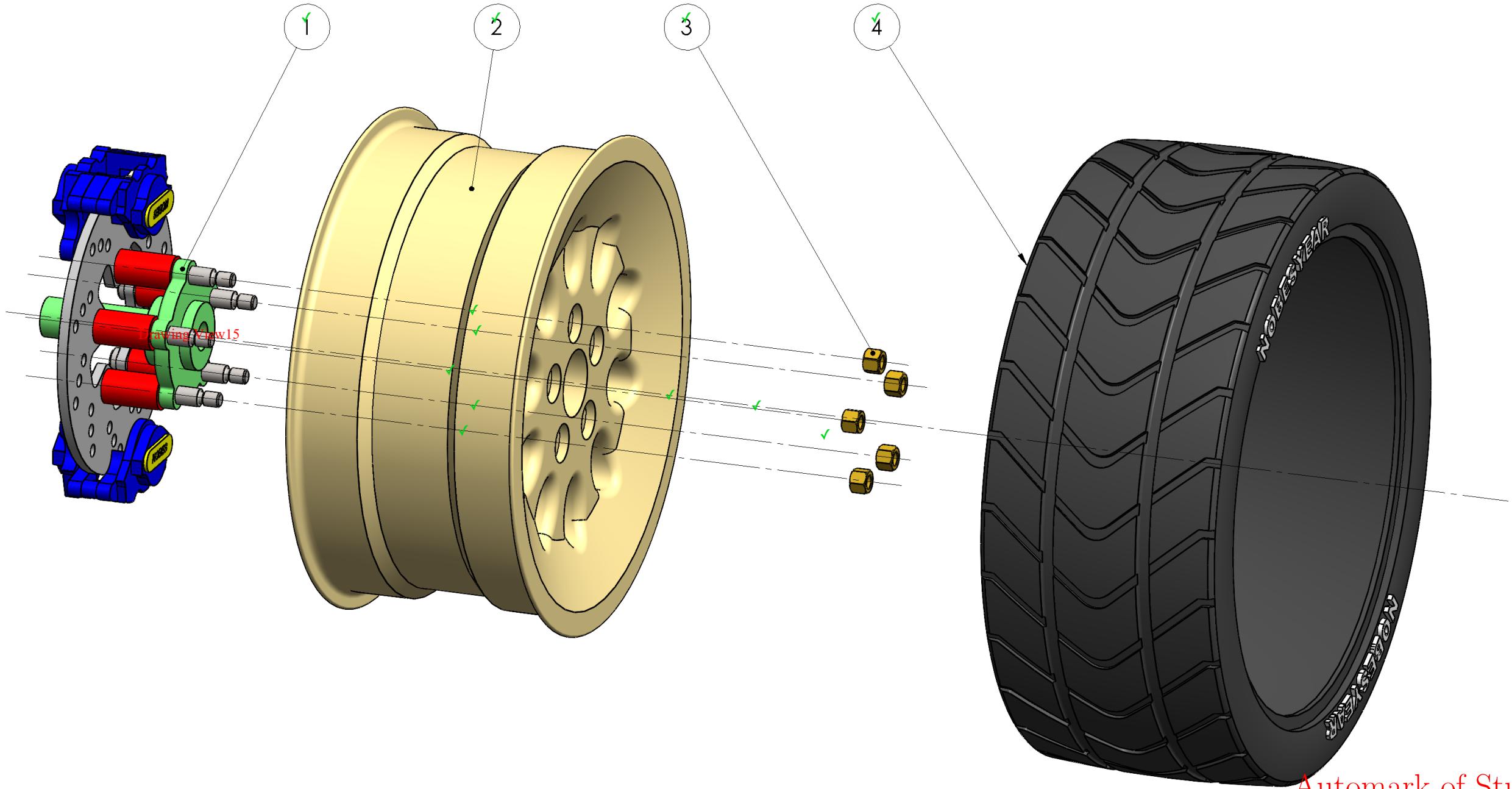
2

Snapped to Corner

Drawing View15: 48/48
DetailItem439: 40/40
SHEET TOTAL: 137/137

Correct Height
Correct Font
Correct Font Size
Correct Column Order
Correct Content

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Profile Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



Automark of Student Submission

Correct Tangent Line style
Correct Scale
Correct Display style

MecE 265	UNLESS OTHERWISE SPECIFIED:
Instructor: Dr DS Nobes Fall 2021	DRAWN BY:
Comments:	David S. Nobes
	Lab Day ALL
	SM By D.S.Nobes
	TA Initials DSN
	zacha June 30, 2022 10:48:09 AM September 23, 2010 11:25:48 AM
MATERIAL: Various	SURFACE FINISH: 0.6 μm
FILE NAME: MecE265_Car_Hub_Rim_Tire	DO NOT SCALE DRAWING

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

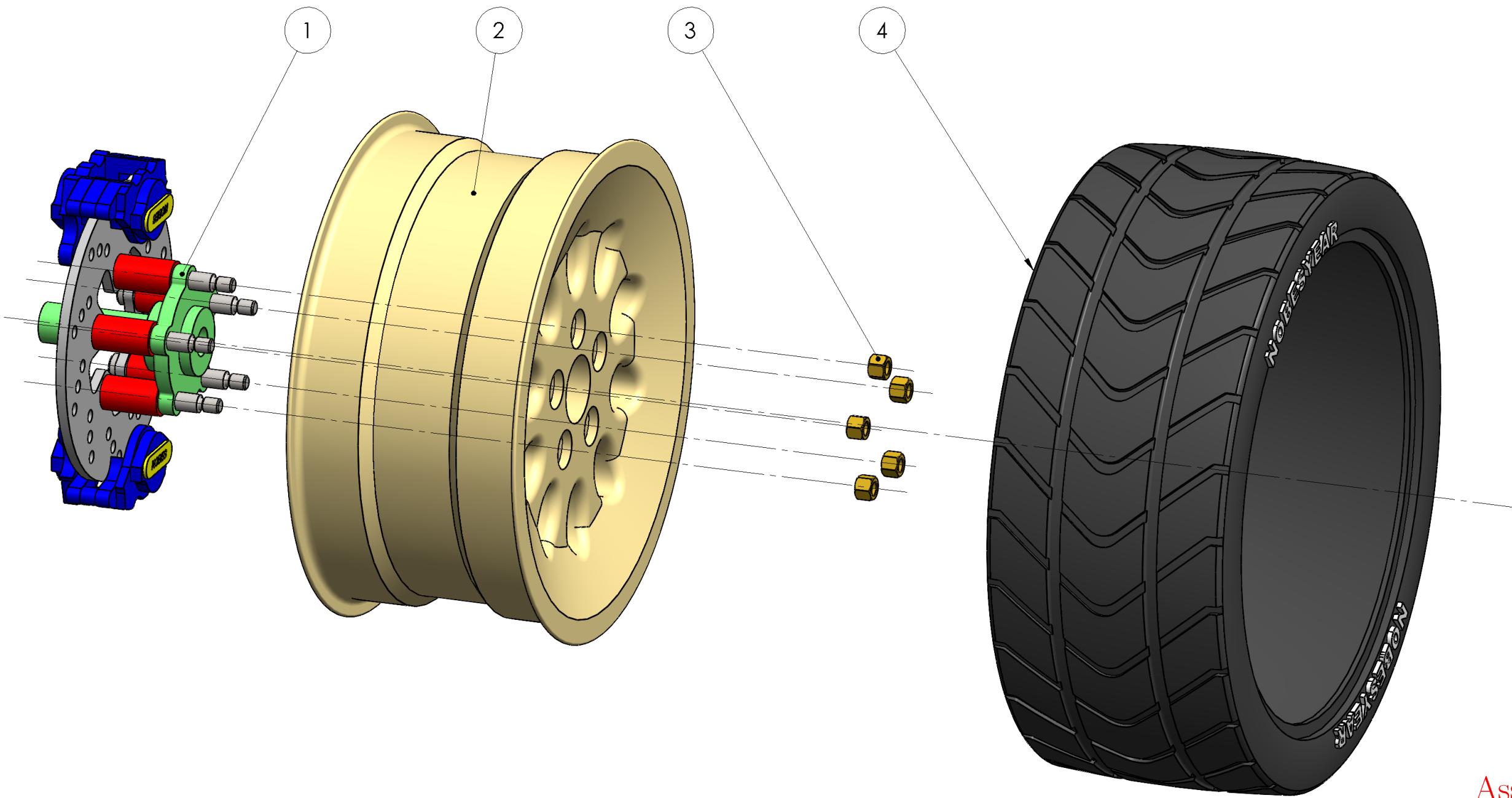
TITLE:

**Hub, Rim, Tire
Assembly**

SIZE	Assignment Number	REV
B	Assignment 03	2
SCALE: 1:4	Mass: 175308.62	SHEET 1 OF 3

8 7 6 5 4 3 2 1

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



Assignment Solution

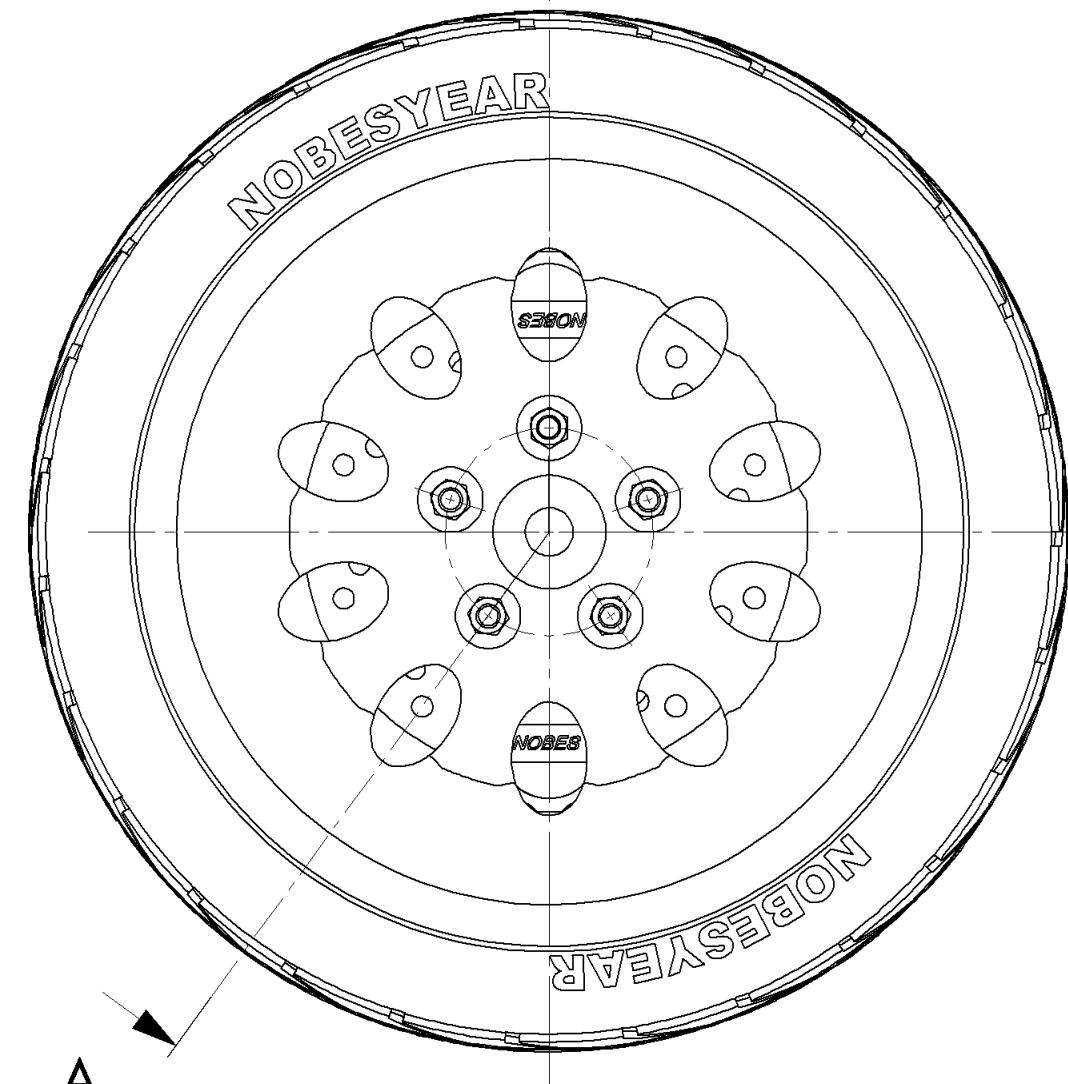
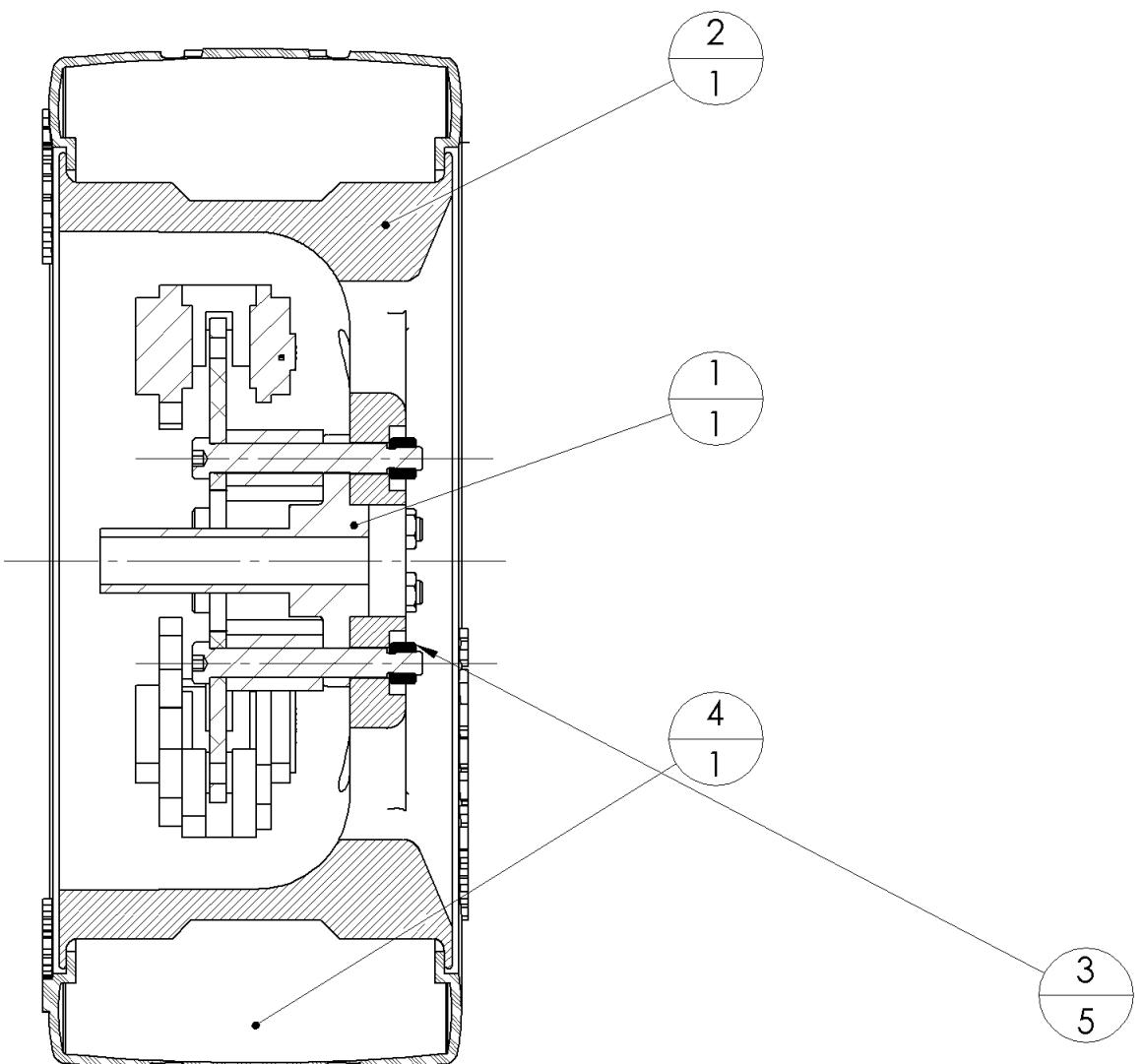
MecE 265	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: $\pm 0.5^\circ$ LINEAR $X = \pm 0.5$ $X.X = \pm 0.1$ $XXX = \pm 0.025$	DRAWN BY: David S. Nobes
Instructor: Dr DS Nobes Fall 2021	Comments:	Lab Day ALL
		SM By D.S.Nobes
	SURFACE FINISH $0.6 \mu\text{m}$	TA Initials DSN
	DO NOT SCALE DRAWING	zacha September 28, 2021 2:35:53 PM September 23, 2010 11:25:48 AM
MATERIAL: Various	FILE NAME: MecE265_Car_Hub_Rim_Tire	SIZE B Assignment Number Assignment 03 REV 2
SCALE: 1:4 Mass: 175308.62 SHEET 1 OF 3		

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

TITLE:
**Hub, Rim, Tire
Assembly**

ITEM NO.	SW-File Name(File Name)	SW-Title>Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Cartire	Rubber	D.S. Nobes	1

SECTION A-A



A

Student Submission

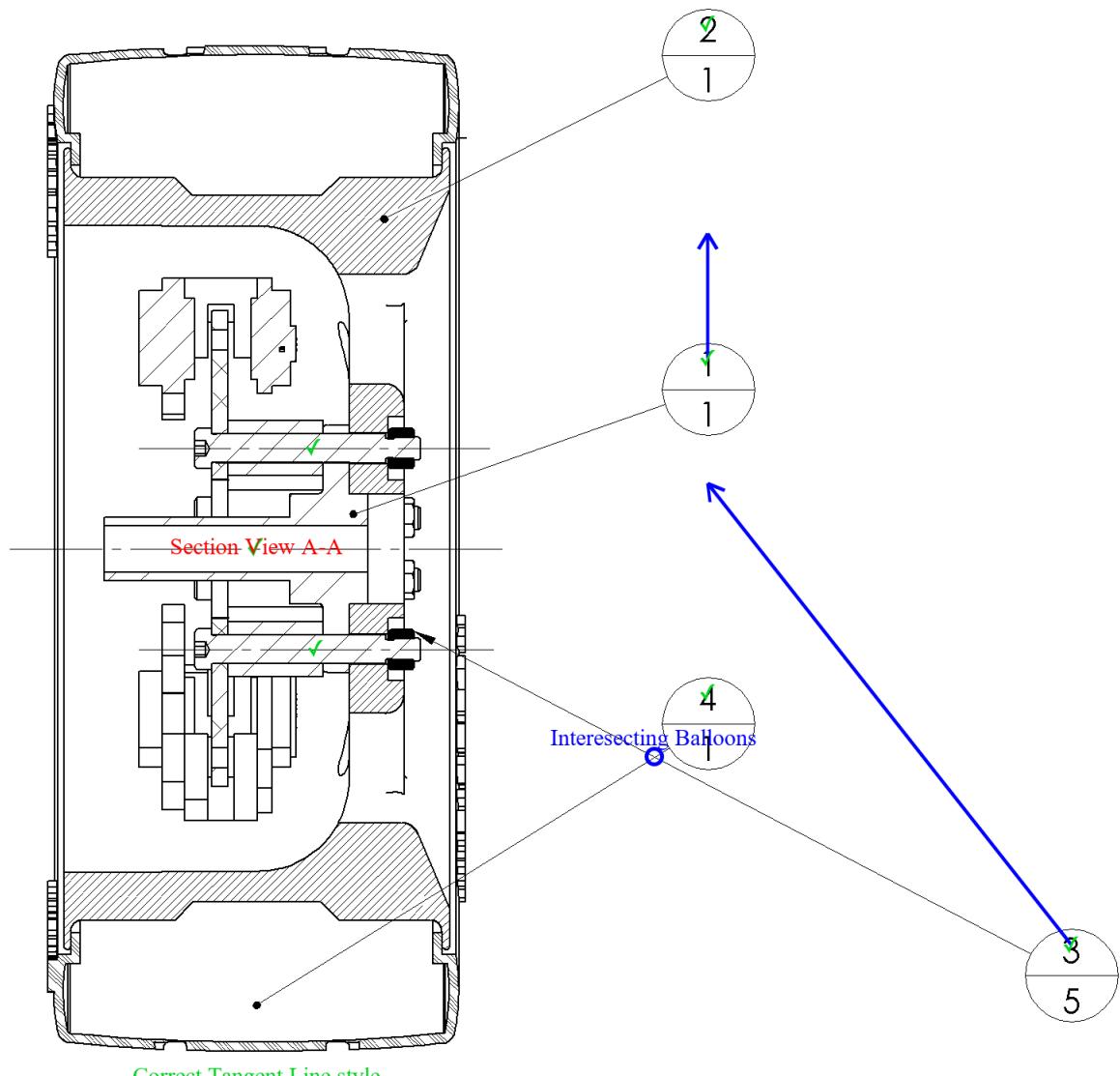
MecE 265	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: $\pm 0.5^\circ$ LINEAR $X = \pm 0.5$ $X.X = \pm 0.1$ $XXX = \pm 0.025$	DRAWN BY: David S. Nobes
Instructor: Dr DS Nobes Fall 2021	Comments:	Lab Day ALL
		SM By D.S.Nobes
		TA Initials DSN
		zacha June 30, 2022 10:48:09 AM September 23, 2010 11:25:48 AM
MATERIAL: Various	SURFACE FINISH $0.6 \mu\text{m}$	DO NOT SCALE DRAWING
FILE NAME: MecE265_Car_Hub_Rim_Tire		
B	Assignment Number Assignment 03	REV 2
SCALE: 1:4 Mass: 175308.62 SHEET 2 OF 3		

8 7 6 5 4 3 2 1

Drawing View1: 50/57
Section View A-A: 39/39
DetailItem493: 30/40
SHEET TOTAL: 163/185

Correct Height	ITEM NO.	SW-File Name(File Name)	SW-Title>Title	Material	SW-Author(Author)	QTY.
Correct Font	1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
Correct Font Size	2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
Correct Column Order	3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
Correct Content	4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1

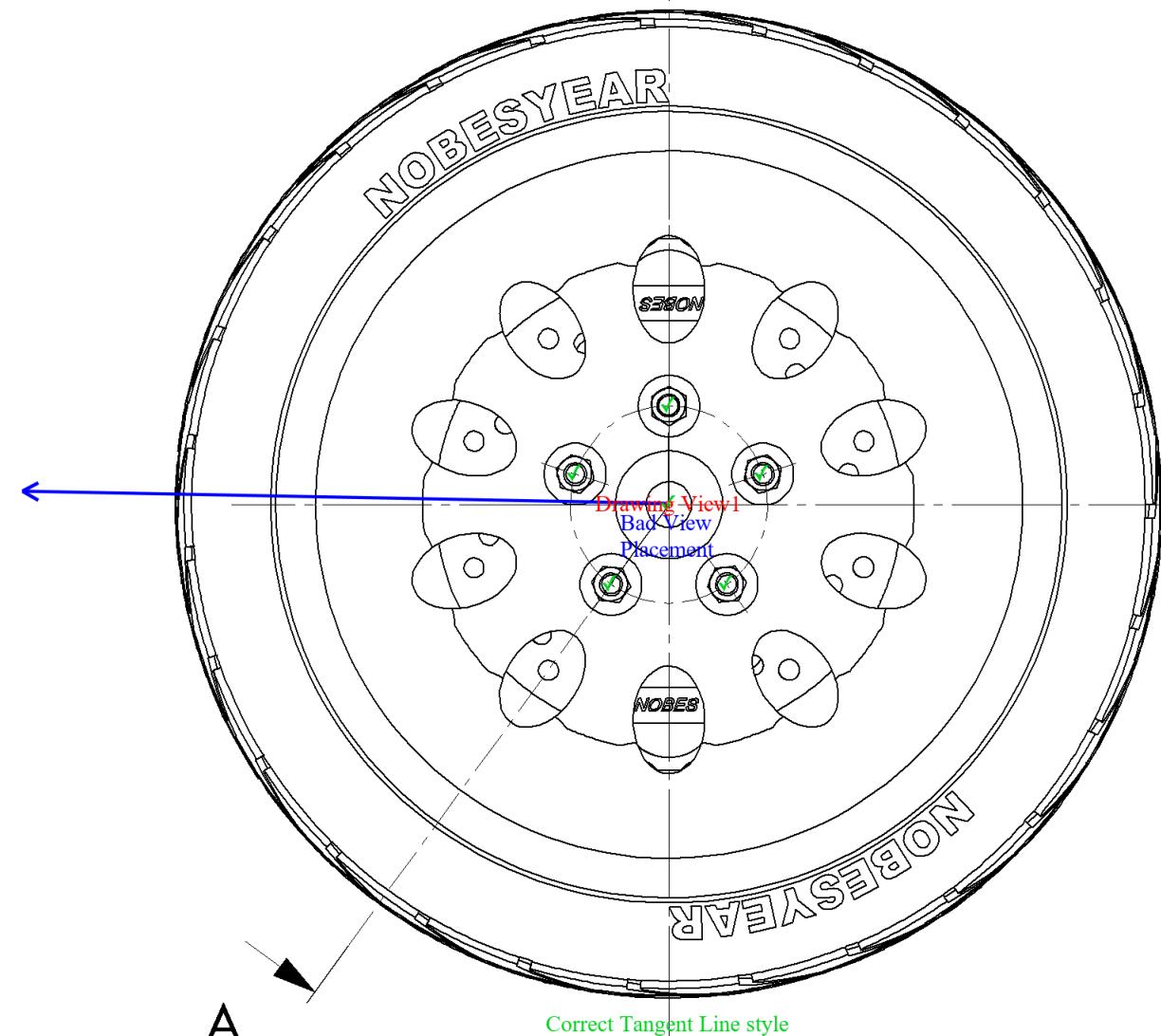
SECTION A-A



Correct Tangent Line style

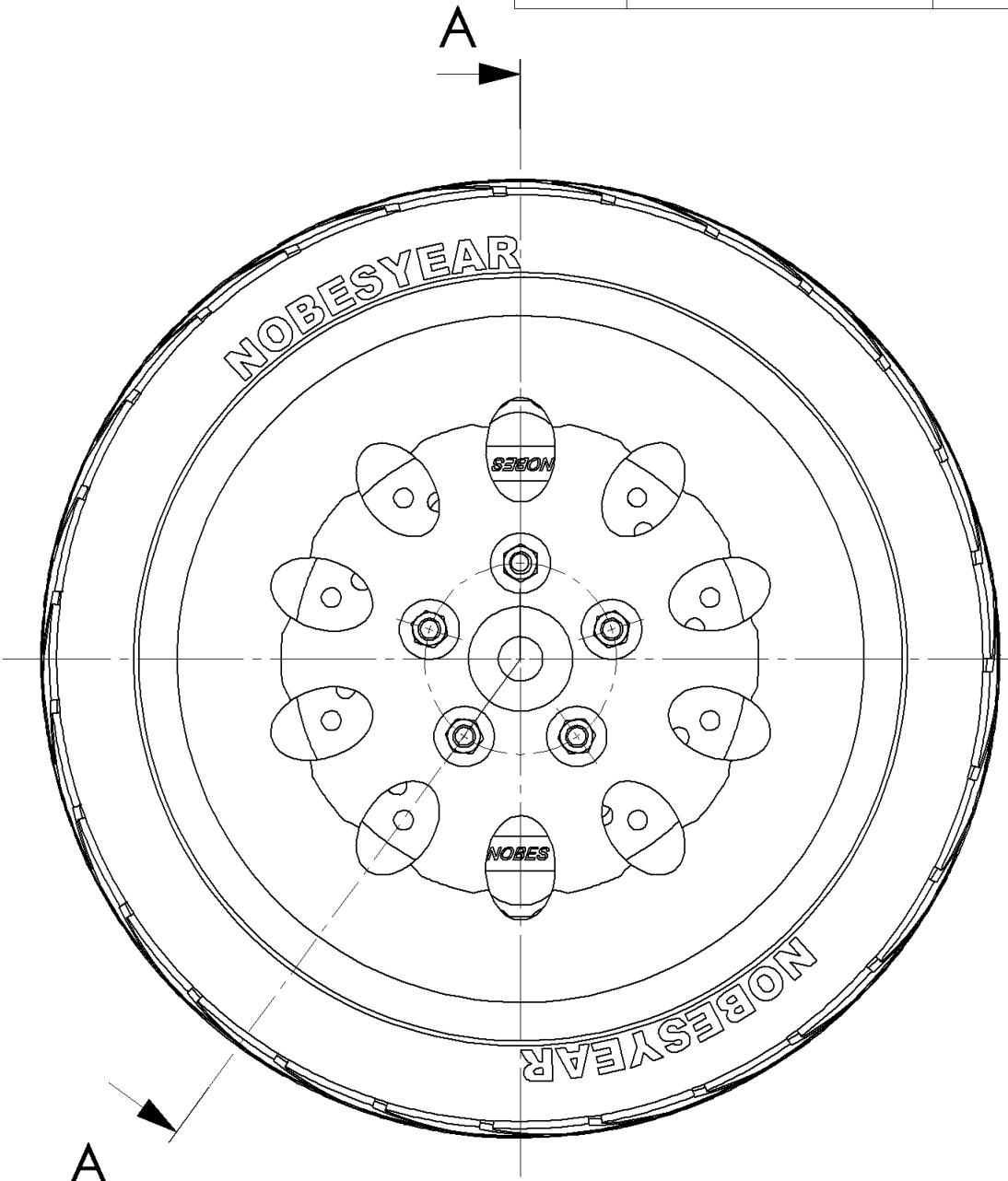
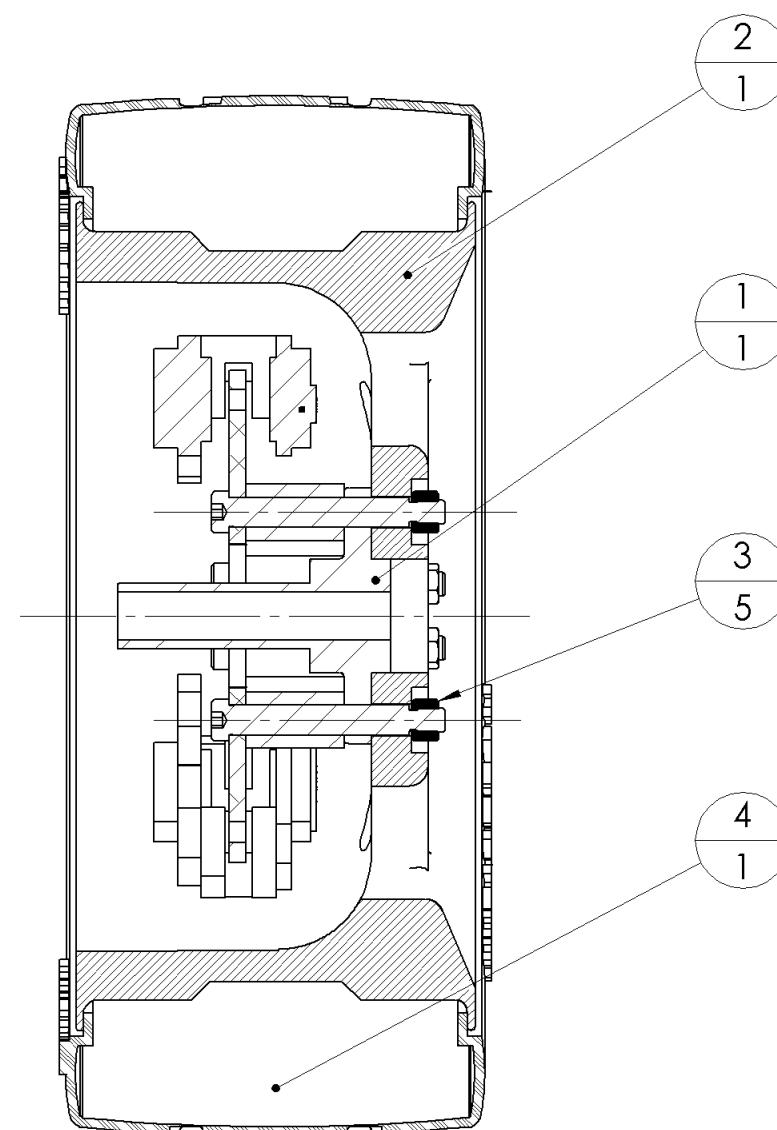
Correct Scale

Correct Display style



MecE 265		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: $\pm 0.5^\circ$ LINEAR $X = \pm 0.5$ $X.X = \pm 0.1$ $XXX = \pm 0.025$	DRAWN BY: David S. Nobes	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA
Instructor: Dr DS Nobes Fall 2021	Comments:	Lab Day ALL	TITLE: Hub, Rim, Tire Assembly	
		SM By D.S.Nobes		
		TA Initials DSN		
		zacha June 30, 2022 10:48:09 AM September 23, 2010 11:25:48 AM		
MATERIAL: Various	FILE NAME: MecE265_Car_Hub_Rim_Tire	SIZE B Assignment Number Assignment 03	REV 2	
DO NOT SCALE DRAWING				
SCALE: 1:4 Mass: 175308.62 SHEET 2 OF 3				

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1

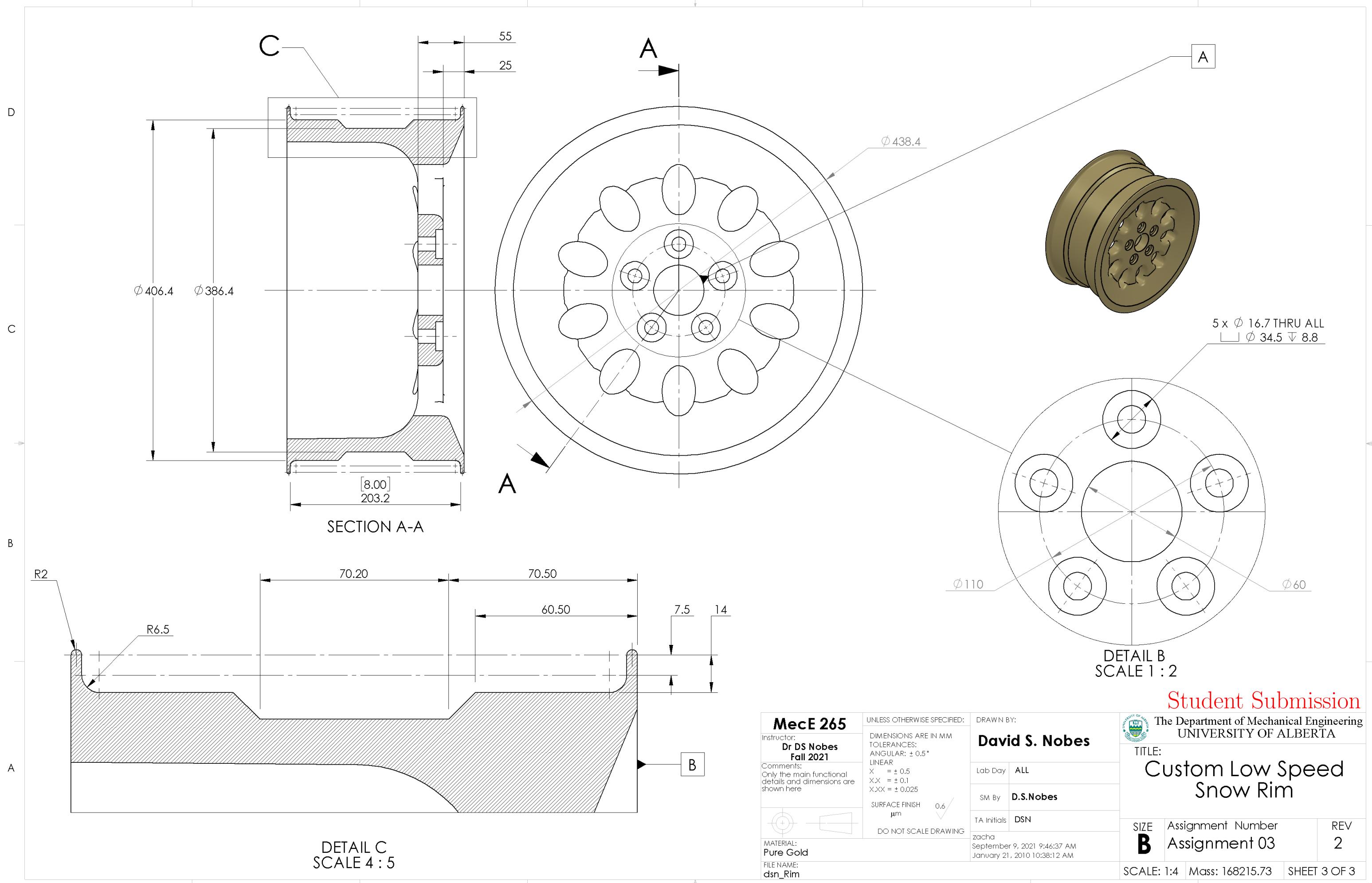


MecE 265		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: $\pm 0.5^\circ$ LINEAR $X = \pm 0.5$ $X.X = \pm 0.1$ $XXX = \pm 0.025$	DRAWN BY: David S. Nobes
Instructor: Dr DS Nobes Fall 2021	Comments:	Lab Day ALL	
		SM By D.S.Nobes	
		TA Initials DSN	
		zacha September 28, 2021 2:35:53 PM September 23, 2010 11:25:48 AM	
MATERIAL: Various		DO NOT SCALE DRAWING	
FILE NAME: MecE265_Car_Hub_Rim_Tire			
B	Assignment Number Assignment 03	REV 2	
SCALE: 1:4 Mass: 175308.62 SHEET 2 OF 3			

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

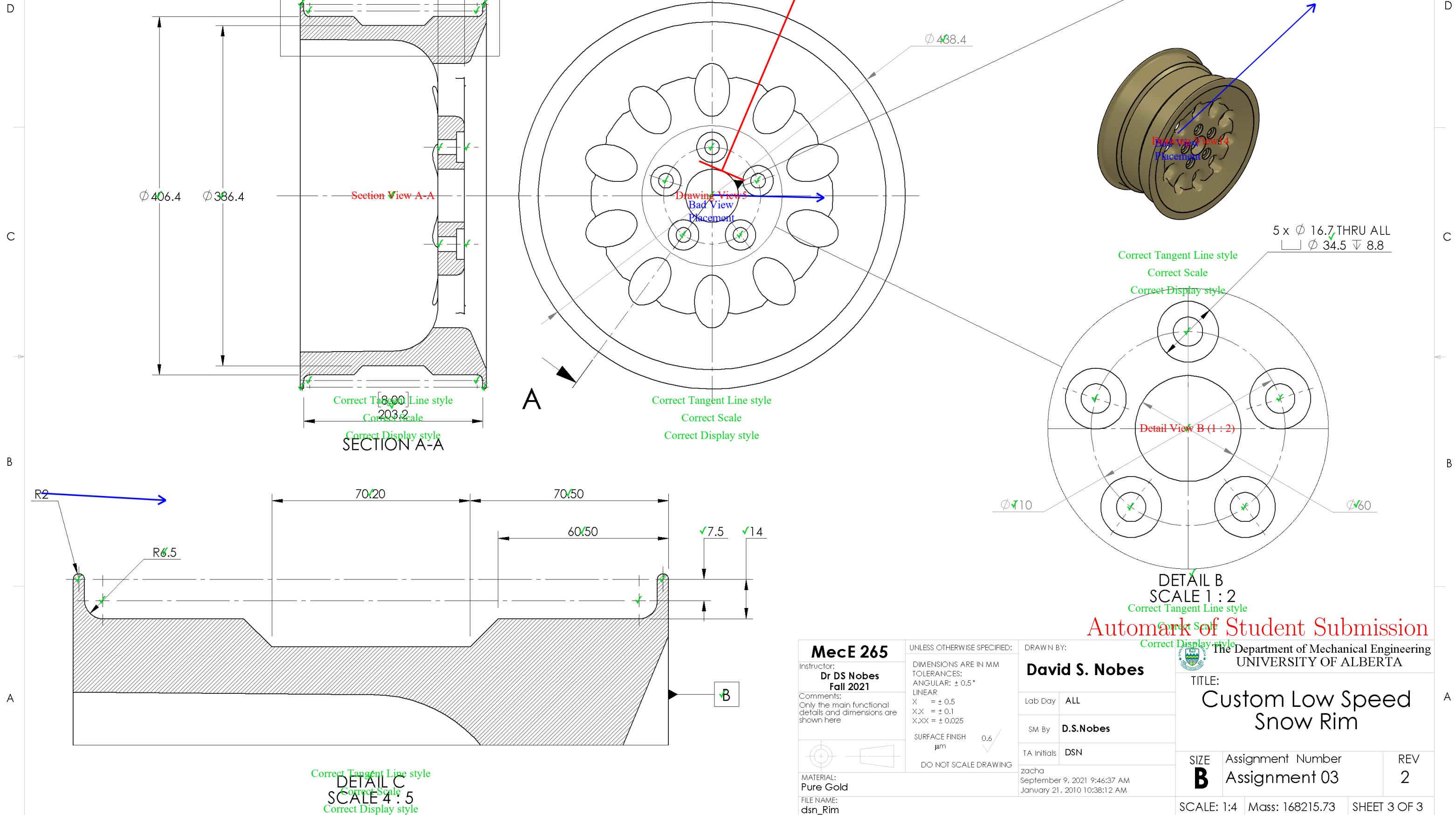
TITLE:
**Hub, Rim, Tire
Assembly**

8 7 6 5 4 3 2 1



8 7 6 5 4 3 2 1

Drawing View5: 50/62
Detail View B (1 : 2): 69/69
Drawing View14: 16/22
Section View A-A: 102/102
Detail View C (4 : 5): 83/84
SHEET TOTAL: 369/388



MecE 265

Instructor:
Dr DS Nobes
Fall 2021

Comments:
Only the main functional details and dimensions are shown here

DO NOT SCALE DRAWING

0.6

SURFACE FINISH μm

MATERIAL: Pure Gold

FILE NAME: dsn_Rim

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MM
TOLERANCES:
ANGULAR: $\pm 0.5^\circ$
LINEAR
 $X = \pm 0.5$
 $X.X = \pm 0.1$
 $XXX = \pm 0.025$

DRAWN BY:
David S. Nobes
Lab Day ALL
SM By D.S.Nobes
TA Initials DSN

zacha
September 9, 2021 9:46:37 AM
January 21, 2010 10:38:12 AM

Automate of Student Submission
The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

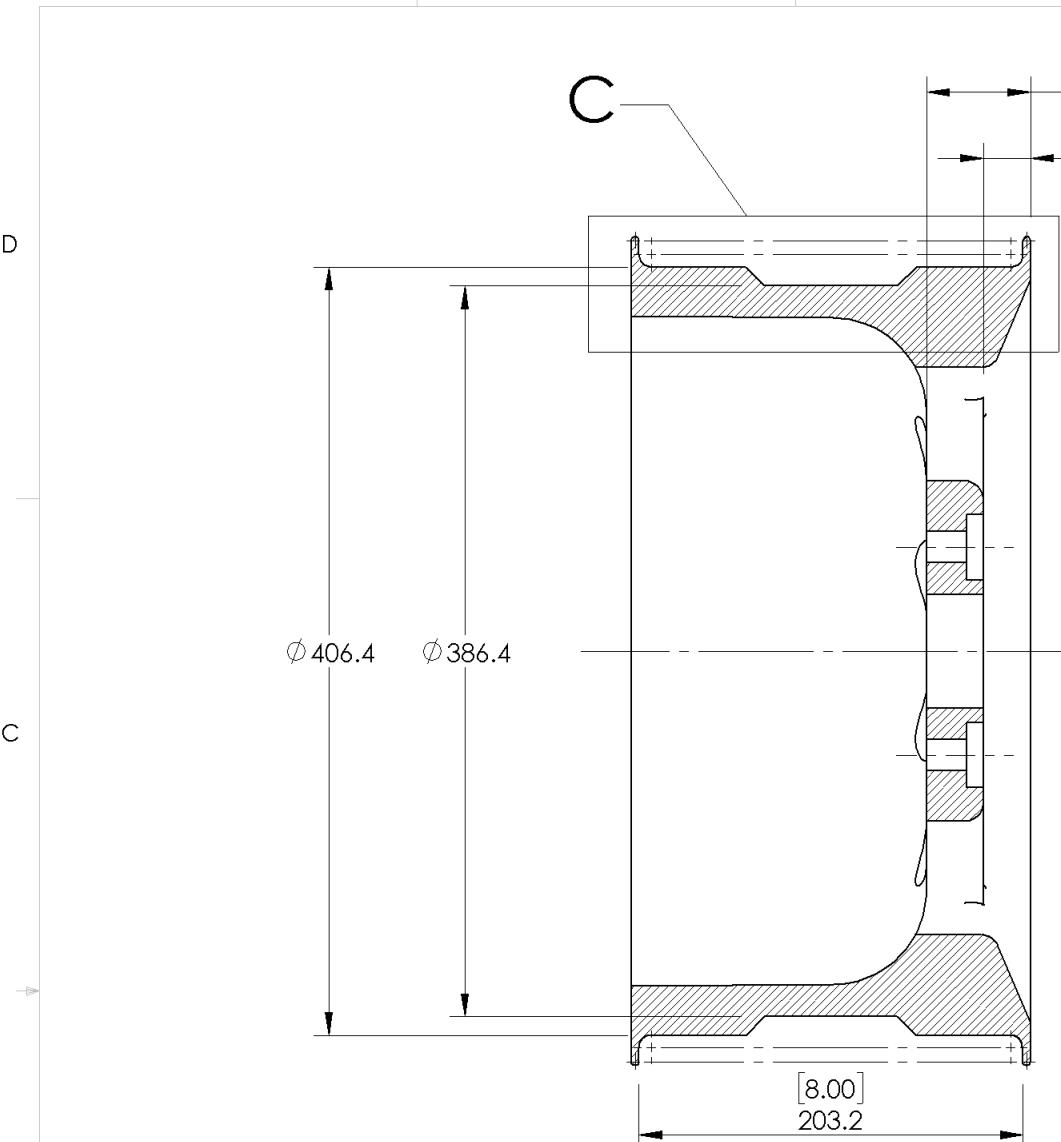
Correct Scale
Correct Display style

DETAIL B
SCALE 1 : 2
TITLE:
Custom Low Speed
Snow Rim

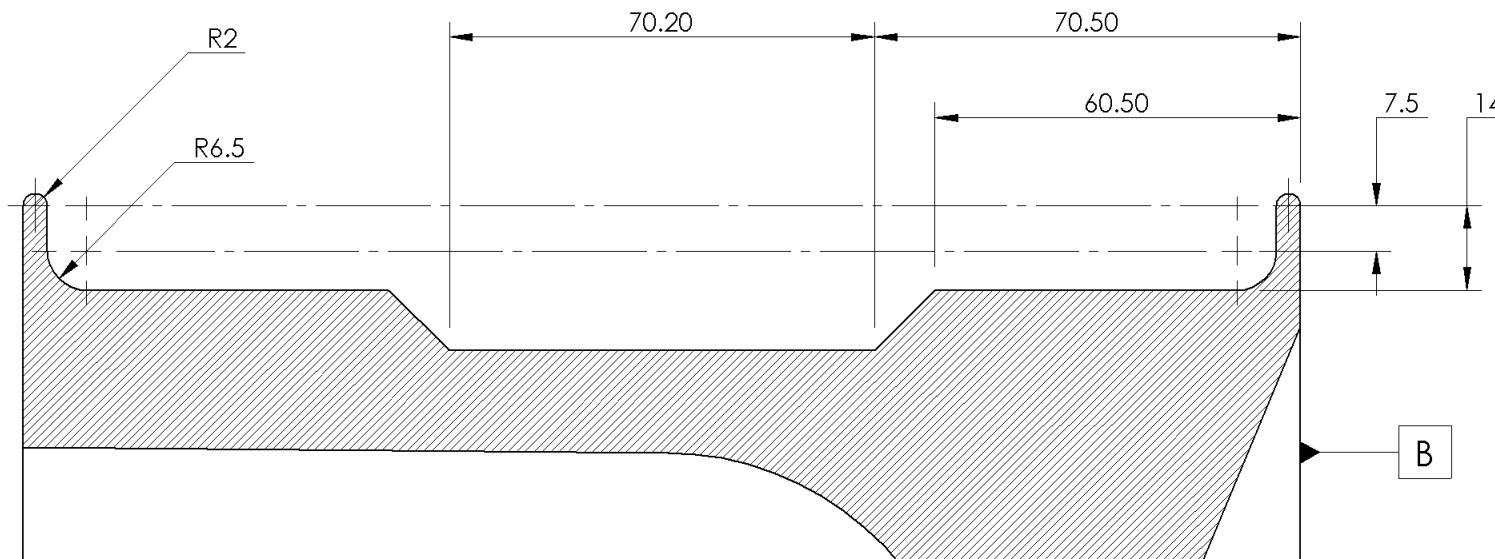
SIZE B Assignment Number
Assignment 03 REV
2

SCALE: 1:4 Mass: 168215.73 SHEET 3 OF 3

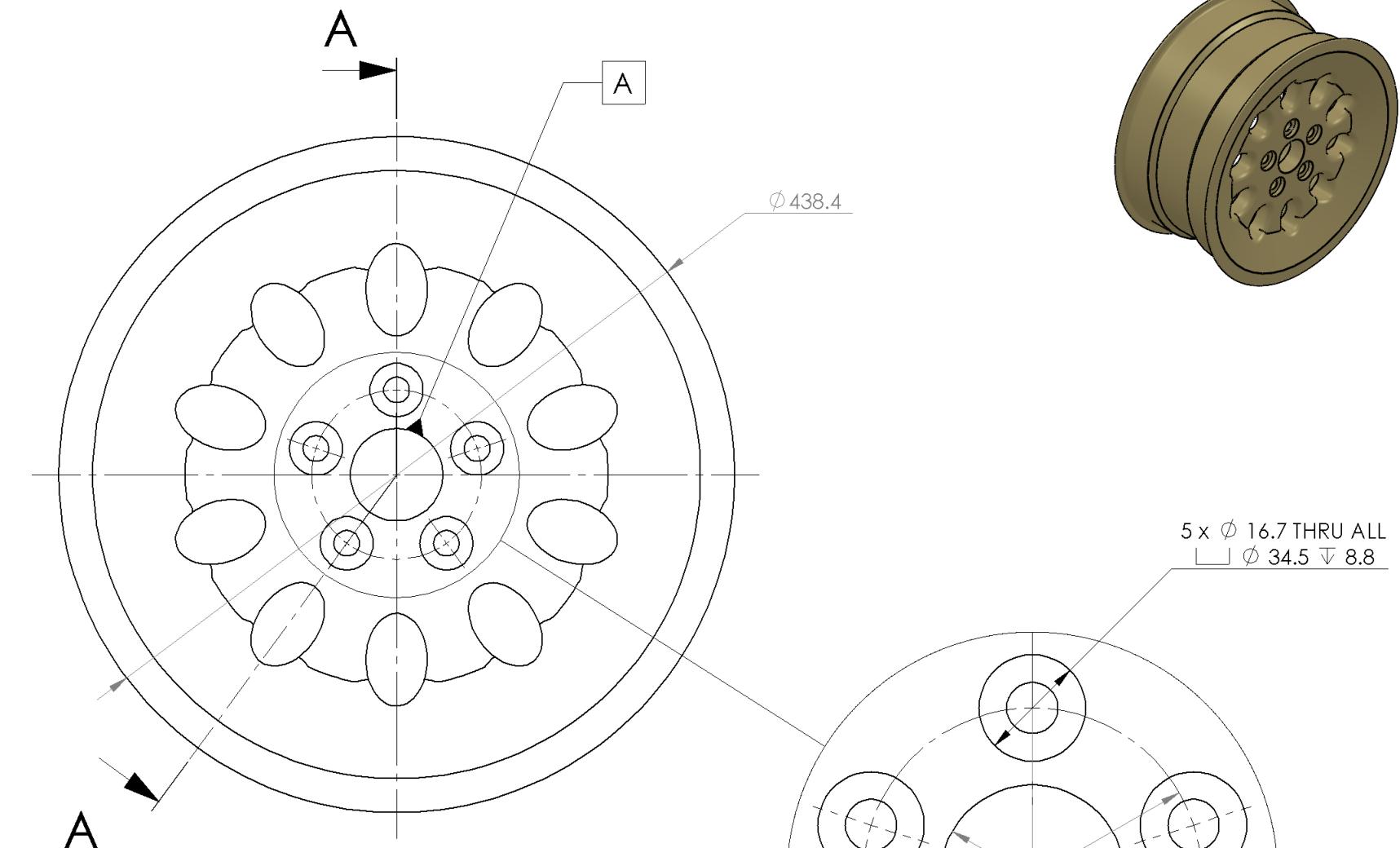
8 7 6 5 4 3 2 1



SECTION A-A



DETAIL C
SCALE 4 : 5



Assignment Solution
MecE 265
 Instructor: Dr DS Nobes Fall 2021
 Comments: Only the main functional details and dimensions are shown here
 UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN MM
 TOLERANCES:
 ANGULAR: $\pm 0.5^\circ$
 LINEAR X = ± 0.5
 XX = ± 0.1
 XXX = ± 0.025
 SURFACE FINISH $0.6 \mu\text{m}$
 DO NOT SCALE DRAWING
 MATERIAL: Pure Gold
 FILE NAME: dsn_Rim

DRAWN BY:
David S. Nobes
 Lab Day ALL
 SM By D.S.Nobes
 TA Initials DSN

zacha
 September 9, 2021 9:46:37 AM
 January 21, 2010 10:38:12 AM

The Department of Mechanical Engineering
 UNIVERSITY OF ALBERTA

TITLE:
Custom Low Speed Snow Rim

SIZE **B** Assignment Number
Assignment 03 REV
2

SCALE: 1:4 Mass: 168215.73 SHEET 3 OF 3