

**Bachelor of Engineering (Honours) (Mechanical) – All Majors with Bachelor of Mathematical and Computer Sciences – Mathematics Major**

Semester 2 Start

[Bachelor of Engineering \(Honours\) \(Mechanical\) with Bachelor of Mathematical and Computer Sciences – Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) - Aerospace Engineering Major with Bachelor of Mathematical and Computer Sciences – Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) – Defence Systems Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) – Mechanical Engineering Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) – Mechatronics and Robotics Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) – Medical Technologies Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major](#)

[Bachelor of Engineering \(Honours\) \(Mechanical\) – Renewable Energy Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major](#)

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## Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics- Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	General Elective <input type="checkbox"/>
S 2	General Elective <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	General Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	General Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>



Year 6			
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Core Courses		Double Degree Courses	

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH 4112 Combustion Technology & Emission Control <input type="checkbox"/>
	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	MECH ENG 4124 Robotics M <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>
	ELEC ENG 3100 Systems Engineering <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>
	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>
	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>			
S2	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4107 Air Conditioning <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>
	MECH ENG 4125 Stresses in Plates & Shells <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>
	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>		
Summer	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>		
TBC	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	CEME 3007 Integrated Environment Planning and Impact Assessment <input type="checkbox"/>		

### NOTES

^ **EAL:** Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering

# **Maths:** Students who have not passed SACE Stage 2 Specialist Maths must enrol in MATHS 1013 Mathematics IM before enrolling in MATHS 1011 Mathematics IA. Manage your enrolment by completing MATHS 1013 Mathematics IM in semester 1 followed by MATHS 1011 Mathematics IA in semester 2 and MATHS 1012 Mathematics IB in summer school. MATHS 1013 Mathematics IM is in addition to the requirements of this program.

**Internships:** The 8 weeks of internship must be supervised by a qualified engineer and may be completed in one placement or a series of placements. The Faculty recommends students undertake internships upon commencement of third year engineering courses. Enrolment into 6 unit internship

course opens from S1 2021. Internships are self-sourced and resources are available through [Careers Service](#). Register with CareerHub to access a database where opportunities are posted.

**General Electives:** How to choose an elective course in your area of interest? Please refer to the steps via the link: <https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment>

**Program Rules:** For academic program rules please refer to the following website: <https://calendar.adelaide.edu.au/faculty/ecms>

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## Bachelor of Engineering (Honours) (Mechanical) - Aerospace Engineering Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Courses

Major Courses

Double Degree Courses

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	ELEC ENG 3100 Systems Engineering <input type="checkbox"/>
	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	MECH ENG 4118 - Finite Element Analysis of Structures <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>
S2	MECH ENG 3032 Micro-Controller Processing <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 4107 Air Conditioning <input type="checkbox"/>

### NOTES

**^ EAL:** Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering

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# Bachelor of Engineering (Honours) (Mechanical) - Defence Systems Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	ENG 3305 Human Factors for Decision Making <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	POLIS 1104 Introduction to Comparative Politics <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	ENG 4020 Complex Systems Engineering <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	ENG 4010 Defence Leadership <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Computer Science Elective <input type="checkbox"/>

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>
	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>
	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH ENG 4112 Combustion Technology & Emission Control <input type="checkbox"/>
	MECH ENG 4124 Robotics M <input type="checkbox"/>	MECH ENG 4111 CFD for Engineering Applications <input type="checkbox"/>	GEOG 2129 Introductory GIS <input type="checkbox"/>	
S2	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	MECH ENG 4107 Air Conditioning <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>
	MECH ENG 4125 Stresses in Plates & Shells <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>
	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>
Summer	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 4115 Engineering Acoustics <input type="checkbox"/>	
TBC	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>			

### NOTES

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## Bachelor of Engineering (Honours) (Mechanical) - Mechanical Engineering Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 4118 Finite Element Analysis of Structure <input type="checkbox"/>	MECH ENG 4111 CFD for Engineering Applications <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Courses

Major Courses

Double Degree Courses

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 4124 Robotics M <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	ELEC ENG 3100 Systems Engineering <input type="checkbox"/>
	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>
	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH ENG 4112 Combustion Technology & Emission Control <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis
	GEOG 2129 Introductory GIS <input type="checkbox"/>	DEVT 2100 - Poverty and Social Development <input type="checkbox"/>		
S2	MECH ENG 3032 Micro-Controller Processing <input type="checkbox"/>	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4107 Air Conditioning <input type="checkbox"/>
	MECH ENG 4108 Aircraft Design <input type="checkbox"/>	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 4125 Stresses in Plates & Shells <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>
	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>	
Summer	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 4115 Engineering Acoustics <input type="checkbox"/>	
TBC	CEME 3007 Integrated Environment Planning & Impact Assessment <input type="checkbox"/>			

### NOTES

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Bachelor of Engineering (Honours) (Mechanical) - Mechatronics and Robotics Major with  
Bachelor of Mathematical and Computer Sciences Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	ELEC ENG 2105 Electronic Circuits <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4124 Robotics M <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Courses

Major Courses

Double Degree Courses

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 2020 - Materials & Manufacturing <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>
	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>
	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH ENG 4112 Combustion Technology & Emission Control <input type="checkbox"/>	MECH ENG 4111 CFD for Engineering Applications <input type="checkbox"/>
	GEOG 2129 Introductory GIS <input type="checkbox"/>	DEVT 2100 - Poverty and Social Development <input type="checkbox"/>		
S2	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4107 Air conditioning <input type="checkbox"/>
	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 4125 Stresses in Plates & Shells <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>
	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>	
Summer	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>			
TBC	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	MECH ENG 4115 Engineering Acoustics <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	

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## Bachelor of Engineering (Honours) (Mechanical) - Medical Technologies Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S	# MATHS 1011 Mathematics IA	^ ENG 1001 Introduction to Engineering	CHEM ENG 1009 Materials I	MECH ENG 1007 Engineering Mechanics – Dynamics
2				
Year 2				
S	MATHS 1012 Mathematics IB	ENG 1002 Programming (Matlab and C)	CEME 1004 Engineering Mechanics-Statics	ELEC ENG 1101 Electronic Systems
1				
S	MATHS 2107 Statistics & Numerical Methods II	MECH ENG 2002 Stress Analysis & Design	MECH ENG 2019 Dynamics & Control I	MECH ENG 2101 Mechatronics IM
2				
Year 3				
S	MATHS 2106 Differential Equations for Engineers II	MECH ENG 2100 Design Practice	MECH ENG 2021 Thermo-Fluids I	ANAT SC 1102 Human Biology 1A
1				
S	MECH ENG 3038 Computer Aided Engineering	MECH ENG 3028 Dynamics & Control II	ANAT SC 2009 Musculoskeletal Anatomy	Level II or III Mathematics Elective
2				
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S	ENG 3004 Interdisciplinary Professional Practice	MECH ENG 3102 Heat Transfer & Thermodynamics	ENG 3101 Introduction to Medical Technologies	PHYSIOL 2510 Physiology IIA
1				
S	ENG 3005 Research Method & Project Management	ELEC ENG 4115 Biomedical Instrumentation	Mechanical Engineering Elective (see elective table)	Level II or III Mathematics Elective
2				
Year 5				
S	ENG 4001A Research Project Part A	Mechanical Engineering Elective (see elective table)	Level II or III Mathematics Elective	Level II or III Mathematics Elective
1				
S	ENG 4001B Research Project Part B	MECH ENG 4101 Biomedical Engineering	Mechanical Engineering Elective (see elective table)	Level III Mathematics Elective
2				
Year 6				
S	Mechanical Engineering Elective (see elective table)	Level III Mathematics Elective	Level III Mathematics Elective	Level III Mathematics Elective
1				

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	MECH ENG 4124 Robotics M <input type="checkbox"/>
S2	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>		

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## Bachelor of Engineering (Honours) (Mechanical) - Renewable Energy Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	ELEC ENG 4111 Distributed Generation Technologies <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH 4112 Combustion Technology & Emission Control <input type="checkbox"/>	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	CHEM ENG 4048 Biofuels, Biomass and Wastes <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	ELEC ENG 3100 Systems Engineering <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>
	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>
	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>
	MECH ENG 4124 Robotics M <input type="checkbox"/>	MECH ENG 4111 CFD for Engineering Applications <input type="checkbox"/>	GEOG 2129 Introductory GIS <input type="checkbox"/>	
S2	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	MECH ENG 4125 Stresses in Plates & Shells <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>
	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4107 Air conditioning <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>
	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>
Summer	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>	MECH ENG 4115 Engineering Acoustics <input type="checkbox"/>		

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## Bachelor of Engineering (Honours) (Mechanical) - Smart Technology Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	COMP SCI 1102 Puzzle Based Learning <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>	ELEC ENG 4107 Autonomous Systems <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table.				
Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	COMP SCI 3001 Computer Networks and Applications <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	COMP SCI 3012 Distributed Systems <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>
	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>	MECH ENG 4105 Advanced Vibrations <input type="checkbox"/>	MECH ENG 4124 Robotics M <input type="checkbox"/>
	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	MECH ENG 4112 Combustion Technology & Emission Control <input type="checkbox"/>
	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>			
S2	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	MECH ENG 4145 Sustainable Thermal Technologies <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>
	MECH ENG 4100 Advanced Topics in Aerospace Engineering <input type="checkbox"/>	MECH ENG 4107 Air conditioning <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>
	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>		
TBC	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	MECH ENG 4126 Topics in Welded Structures <input type="checkbox"/>	MECH ENG 4115 Engineering Acoustics <input type="checkbox"/>	

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## Bachelor of Engineering (Honours) (Mechanical) - Sports Engineering Major with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Semester 2

Year 1				
S 2	# MATHS 1011 Mathematics IA <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2102 Sports Engineering I <input type="checkbox"/>
S 2	MECH ENG 3038 Computer Aided Engineering <input type="checkbox"/>	MECH ENG 3028 Dynamics & Control II <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Internship				
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Year 4				
S 1	ENG 3004 Interdisciplinary Professional Practice <input type="checkbox"/>	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3103 Advanced Manufacturing Systems <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>	Level II or III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	MECH ENG 4140 Sports Engineering III <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 6				
S 1	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Mechanical Engineering Elective (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Courses

Major Courses

Double Degree Courses

## Electives Table

CHOOSE FROM THE FOLLOWING MECHANICAL ENGINEERING ELECTIVES				
S1	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	MECH ENG 2020 - Materials & Manufacturing <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	
S2	ELEC ENG 4115 Biomedical Instrumentation <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Processing <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	
Summer	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>			

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