

**Excel Engineering College**

**(Autonomous)**

**Department of Aeronautical Engineering**

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution:

**Classification / Mapping of Course with their societal needs**

Course code and name	Local Needs	Regional Needs	National Needs	Global Needs
<b>B.E AERO Regulation 2020</b>				
20MA105- Mathematics-I for Mechanical Sciences		✓	✓	✓
20AE101- Fundamentals of Aeronautics	✓		✓	✓
20EC103- Basics of Electrical and Electronics Engineering	✓		✓	✓
20ENE01-Communicative English		✓	✓	✓
20CH103- Chemistry for Mechanical Sciences		✓	✓	✓
20ME101- Engineering Graphics	✓		✓	✓
20MC101- Induction Programme	✓		✓	✓
20MA205- Mathematics – II for Mechanical Sciences		✓	✓	✓
20ME201- Engineering Mechanics		✓	✓	✓
20ENE02- Advanced Communicative English	✓		✓	✓
20PH203- Physics for Mechanical Sciences	✓		✓	✓
20CS201- Problem Solving using Python		✓	✓	✓
20AE201- Aeronautical Engineering Practices Laboratory	✓		✓	✓
20MC201- Environmental Sciences	✓		✓	✓
20MA301-Transforms and Boundary Value Problems	✓		✓	✓
20AE301- Aero Engineering Thermodynamics	✓		✓	✓
20AE302- Engineering Materials and Metallurgy		✓	✓	✓
20AE303- Manufacturing Technology		✓	✓	✓
20AE304- Fluid Mechanics and Machinery for Aeronautical Engineers		✓	✓	✓
20AE305- Strength of Materials for Aeronautical Engineers		✓	✓	✓
20AE306- Applied Thermodynamics Laboratory	✓		✓	✓

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20MC302- Interpersonal Skills	✓		✓	✓
20MA401- Numerical Analysis and Statistics		✓	✓	✓
20AE401-Aircraft Structural Mechanics		✓	✓	✓
20AE402- Aircraft Propulsion	✓		✓	✓
20AE403- Aircraft Systems and Instruments	✓		✓	✓
20AE404- Mechanics of Machinery		✓	✓	✓
20AE405- Aerodynamics	✓		✓	✓
20AE406- Propulsion Laboratory	✓		✓	✓
20AE407- Computer Aided Aircraft Components Drawing Laboratory		✓	✓	✓
20MC401- Soft skill		✓	✓	✓
<b>B.E AERO Regulation 2017</b>				
AE8501 -Flight Dynamics	✓		✓	✓
AE8502 - Aircraft Structures - II		✓	✓	✓
AE8503 - Aerodynamics - II		✓	✓	✓
AE8504 - Propulsion - II		✓	✓	✓
AE8505 -Control Engineering		✓	✓	✓
OIM552- Lean Manufacturing		✓	✓	✓
AE8511 -Aircraft Structures Laboratory	✓		✓	✓
AE8512 -Propulsion Laboratory		✓	✓	✓
HS8581 -Professional Communication		✓	✓	✓
AE8601 -Finite Element Methods	✓		✓	✓


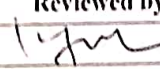
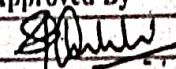
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AE8602 -Experimental Aerodynamics	✓		✓	✓
AE8603 -Composite Materials and Structures	✓		✓	✓
AE8604 -Aircraft Design	✓		✓	✓
AE8605 -Experimental Stress Analysis	✓		✓	✓
AE8611 -Aero Engine and Airframe Laboratory	✓		✓	✓
AE8612 -Computer Aided Simulation Laboratory		✓	✓	✓
AE8613 - Aircraft Design Project - I		✓	✓	✓
GE8077 -Total Quality Management	✓		✓	✓
AE8751 - Avionics	✓		✓	✓
ME8093 -Computational Fluid Dynamics		✓	✓	✓
OML751- Testing of Materials	✓		✓	✓
AE8006 - UAV Systems	✓		✓	✓
AE8009 -Airframe Maintenance and Repair	✓		✓	✓
AE8711 - Aircraft Systems Laboratory		✓	✓	✓
AE8712 - Flight Integration Systems and Control Laboratory		✓	✓	✓
AE8713 - Aircraft Design Project - II	✓		✓	✓
AE8015 - Industrial Aerodynamics	✓		✓	✓
MG8591- Principles of Management		✓	✓	✓
AE8811- Project Work	✓		✓	✓
<b>M.E AERO Regulation 2020</b>				
20PMA101 - Advanced Mathematical Methods	✓		✓	✓

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20PAR101 - Advanced Propulsion System	✓		✓	✓
20PAR102 - Theory of Vibrations	✓		✓	✓
20PARE05 - Experimental stress analysis		✓	✓	✓
20PAR103 - Advanced Aerodynamics		✓	✓	✓
20PAR104 - Advanced Structural Mechanics		✓	✓	✓
20PAR105 - Technical Presentation Seminar		✓	✓	✓
20PAR201 -Advanced UAV Design	✓		✓	✓
20PAR202 - Aircraft Flight Dynamics	✓		✓	✓
20PARE14 – Industrial Aerodynamics	✓		✓	✓
20PARE17 – Wind Power Engineering		✓	✓	✓
20PAR203 - Finite Element Method for Aircraft structure Design		✓	✓	✓
20PAR204 - Computational Fluid Dynamics for Aerodynamics	✓		✓	✓
20PAR205 - Technical Presentation Seminar	✓		✓	✓
20PEE301 - Research Methodology and Intellectual Property Rights	✓		✓	✓
20PAR301 -Project Phase – I	✓		✓	✓
20PAR302 - Internship Training		✓	✓	✓
20PAR401 - Project Phase – II		✓	✓	✓
<b>M.E ISE Regulation 2020</b>				
20PMA105 - Advanced Numerical Methods		✓	✓	✓
20PIS101 -Principles of Safety Management		✓	✓	✓
20PIS102 -Environmental Safety		✓	✓	✓

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20PIS103 -Occupational Health and Industrial Hygiene	✓		✓	✓
20PIS104 -Industrial Safety, Health and Environment Acts	✓		✓	✓
20PISE01 -Plant layout and materials handling	✓		✓	✓
20PIS105 -Technical Seminar - I	✓		✓	✓
20PIS201 -Fire Engineering and Explosion Control	✓		✓	✓
20PIS202 - Computer Aided Hazard Analysis		✓	✓	✓
20PIS203 -Electrical Safety	✓		✓	✓
20PIS204 -Safety in Chemical Industries	✓		✓	✓
20PIS205 -Industrial Safety Laboratory	✓		✓	✓
20PIS206 -Technical Seminar -II		✓	✓	✓
20PEE301 -Research Methodology and Intellectual Property Rights	✓		✓	✓
20PIS302 -Project Work Phase – I	✓		✓	✓
20PIS401 -Project Work Phase – II	✓		✓	✓
	Prepared by	Reviewed by	Approved By	
SIGN				
NAME	Mr.S.R.Arun	Mr.K.Vijay Babu	Dr.S.P.Venkatesan	

