



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.








Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



SCHOOL OF MECHANICAL ENGINEERING
DEPARTMENT OF AERONAUTICAL ENGINEERING
BOARD OF STUDIES MEETING HELD ON 14.12.2019

Members present:

External Members	Signature	Internal Members	Signature
Dr. Paramasivam Professor, Madras Institute, of Technology, Chennai		Dr.S. Prakash, Dean/Faculty of Mechanical	
Er. James Michael Amulu, Senior Product Development Leader, SAP, Bangalore		Dr.P. Boomadevi, Head/Aeronautical Engineering	
		Dr.A. Anderson, Associate Professor, Aeronautical Engineering	
		Dr. S. Manigandan, Assistant Professor, Aeronautical Engineering	
		Mr. P. Gunasekaran, Assistant Professor, Aeronautical Engineering	



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Minutes of the Board of Studies meeting

Board of Studies meeting for the Department of Aeronautical Engineering was held on 14th December 2019 in Aero CAD Lab with the following agenda:

1. Revision of Course "SAEA1202 Fundamentals of Aeronautical Engineering"
2. Revision of Course "SAEA1302 Aircraft Production Techniques"

Welcome Address

At the outset, the Chair Person welcomed the members of BoS and placed the agenda for the deliberations of the members. The following deliberations were made as per the items of the circulated agenda.

Agenda item # 1

Modifications proposed for 2019 batch Bachelors of Engineering– Aeronautical Engineering students in SAEA1202 Fundamentals of Aeronautical Engineering.

Head of the department informed that the department teams have been working on the modification of curriculum and in this direction the following changes were made on SAEA1202 Fundamentals of Aeronautical Engineering.

(a)**Removal of the following topics in Unit III:** Early Airplanes- Pre Wright Brothers era, Wright Flyer, Components of an Airplane and their functions.

(b)**Inclusion of the following topics in Unit III:** Classifications of flight vehicles, Components of an airplane and their functions, Conventional control, powered control, basic instruments for flying - typical systems for control actuation.



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Resolutions: The External members considered the revision made and discussed regarding the revision. Dr. P. Boomadevi pointed out that the removal of topics was necessary. These topics are covered in the course Introduction to Aerodynamics.

Agenda item # 2

Modifications proposed for 2019 batch Bachelors of Engineering– Aeronautical Engineering students in SAEA1302 Aircraft Production Techniques.

Head of the department informed that the department teams have been working on the modification of curriculum and in this direction the following changes were made SAEA1302 Aircraft Production Techniques.

(a)**Removal of the following topics in Unit – IV:** Casting; types of pattern, pattern material, pattern allowance, types of moulding, sand, defects in casting.

(b)**Inclusion of the following topics in Unit – IV:** Production processes – comparison – sand casting – mould, pattern, die – pattern Allowances – materials – types – steps involved in core function and core making – runner, riser, gate-purpose – construction, principle of die-casting, shell moulding, investment casting, centrifugal casting.

Resolutions: The External members considered the revision made and discussed regarding the revision. Dr. P. Boomadevi pointed out that the removal of topics was necessary. These experiments are highly essential for compressible flow studies.

This initiative is appreciated by BoS members and after a discussion about the contents of the syllabus; the course revision was approved for inclusion in the Curriculum.

BoS members accepted the changes and approved the syllabus.

The revised syllabus of the course is enclosed in Annexure-1.



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Vote of Thanks

Dr.P.Boomadevi thanked the expert members for accepting the invitation for attending the BoS meeting. She thanked them for their valuable suggestions on the agenda items presented. She also thanked Dr.S.Prakash, Dean/Chair and Dr.A.Anderson, Associate Professor for their contribution towards the conduct of this BoS meeting.

Dean/CHAIR



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Agenda item # 1

Modifications proposed for SAEA1202 Fundamentals of Aeronautical Engineering.

S.No.	Existing Syllabus R2019	Corrected Syllabus
1	UNIT-III Aircraft Configurations, Systems and Instruments 9 Hrs. Early Airplanes- Pre Wright Brothers era, Wright Flyer, Components of an Airplane and their functions.	UNIT-III Aircraft Configurations, Systems and Instruments 9 Hrs. Classifications of flight vehicles, Components of an airplane and their functions, Conventional control, powered control, basic instruments for flying - typical systems for control actuation.

Agenda item # 2

Modifications proposed for SAEA1302 Aircraft Production Techniques

S.No.	Existing Syllabus R2019	Corrected Syllabus
1	UNIT - IV Casting and Metal Joining Process 9 Hrs. Casting; types of pattern, pattern material, pattern allowance, types of moulding, sand, defects in casting. Types of joining process, welding process - Construction and applications of gas and arc welding, equipment used, flame characteristics, filler, flux materials - soldering and brazing - rivets; purpose, types, classification, riveting tools.	UNIT - IV Casting and Metal Joining Process 9 Hrs. Production processes - comparison - sand casting - mould, pattern, die - pattern Allowances - materials - types - steps involved in core function and core making - runner, riser, gate-purpose - construction, principle of die-casting, shell moulding, investment casting, centrifugal casting. Types of joining process, welding process - Construction and applications of gas and arc welding, equipment used, flame characteristics, filler, flux materials - soldering and brazing - rivets; purpose, types, classification, riveting tools.



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



SCHOOL OF MECHANICAL ENGINEERING
DEPARTMENT OF AERONAUTICAL ENGINEERING
BOARD OF STUDIES MEETING HELD ON 15.06.2019

Members present:

External Members	Signature	Internal Members	Signature
Dr. Paramasivam Professor, Madras Institute, of Technology, Chennai		Dr.S. Prakash, Dean/Faculty of Mechanical	
Er. James Michael Amulu, Senior Product Development Leader, SAP, Bangalore		Dr.P. Boomadevi, Head/Aeronautical Engineering	
		Dr.A. Anderson, Associate Professor, Aeronautical Engineering	
		Dr. S. Manigandan, Assistant Professor, Aeronautical Engineering	
		Mr. P. Gunasekaran, Assistant Professor, Aeronautical Engineering	



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Minutes of the Board of Studies meeting

Board of Studies meeting for the Department of Aeronautical Engineering was held on 15th June 2019 in Aero CAD Lab with the following agenda:

1. Revision of Course "SAEA1401 Aircraft Propulsion"
2. Revision of Course "SAEA1403 Low Speed Aerodynamics"

Welcome Address

At the outset, the Chair Person welcomed the members of BoS and placed the agenda for the deliberations of the members. The following deliberations were made as per the items of the circulated agenda.

Agenda item # 1

Modifications proposed for 2019 batch Bachelors of Engineering– Aeronautical Engineering students in SAEA1401 Aircraft Propulsion.

Head of the department informed that the department teams have been working on the modification of curriculum and in this direction the following changes were made on SAEA1401 Aircraft Propulsion.

(a)**Removal of the following topics in Unit V:** RAMJET and SCRAMJET engine working principle and performance characteristics.

(b)**Inclusion of the following topics in Unit V:** Operating principle of RAMJET engine- RAMJET with afterburner- RAMJET performance- SCRAMJET working principle- Problems faced in supersonic combustion.

Resolutions: The External members considered the revision made and discussed regarding the revision. Dr. P. Boomadevi pointed out that the removal of topics was necessary. These topics are covered in the course Fundamentals of Aeronautical Engineering.

Agenda item # 2



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Modifications proposed for 2019 batch Bachelors of Engineering– Aeronautical Engineering students in SAEA1403 Low Speed Aerodynamics.

Head of the department informed that the department teams have been working on the modification of curriculum and in this direction the following changes were made SAEA1403 Low Speed Aerodynamics.

(a) **Removal of the following topics in Unit – II:** Conformal mapping, Kutta-Joukowski transformation and Joukowski airfoil sections. Blasius integral theorem.

(b) **Inclusion of the following topics in Unit – II:** Models of the fluid: control volumes and fluid elements. Continuity, Momentum and energy equations. Substantial derivative, incompressible Bernoulli's equation.

Resolutions: The External members considered the revision made and discussed regarding the revision. Dr. P. Boomadevi pointed out that the removal of topics was necessary. These topics are covered in the course Introduction to Aerodynamics.

This initiative is appreciated by BoS members and after a discussion about the contents of the syllabus; the course revision was approved for inclusion in the Curriculum. BoS members accepted the changes and approved the syllabus.

The revised syllabus of the course is enclosed in Annexure-1.

Vote of Thanks

Dr.P.Boomadevi thanked the expert members for accepting the invitation for attending the BoS meeting. She thanked them for their valuable suggestions on the agenda items presented. She also thanked Dr.S.Prakash, Dean/Chair and Dr.A.Anderson, Associate Professor for their contribution towards the conduct of this BoS meeting.

Dean/CHAIR



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 51 / 52 / 54 / 55 Fax: 044 - 2450 2344

www.sathyabama.ac.in



Agenda item # 1

Modifications proposed for SAEA1401 Aircraft Propulsion.

S.No.	Existing Syllabus R2019	Corrected Syllabus
1	UNIT-V Ramjet and Scramjet 9 Hrs. RAMJET and SCRAMJET engine working principle and performance characteristics.	UNIT-V Ramjet and Scramjet 9 Hrs. Operating principle of RAMJET engine- RAMJET with afterburner- RAMJET performance- SCRAMJET working principle- Problems faced in supersonic combustion.

Agenda item # 2

Modifications proposed for SAEA1403 Low Speed Aerodynamics

S.No.	Existing Syllabus R2019	Corrected Syllabus
1	UNIT - II Low Speed Flow 9 Hrs. Conformal mapping, Kutta-Joukowski transformation and Joukowski airfoil sections. Blasius integral theorem.	UNIT - II Low Speed Flow 9 Hrs. Models of the fluid: control volumes and fluid elements. Continuity, Momentum and energy equations. Substantial derivative, incompressible Bernoulli's equation.