

# School of Aeronautics (Neemrana)

I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Finite Elements Methods	707 Malay Maw.	An introduction to use of finite elements procedure <ul style="list-style-type: none"><li>* Physical problem, mathematical models and finite elements solution</li><li>* Effectiveness of a mathematical model</li><li>* Reliability of a mathematical model</li></ul>	7-10-2017
02	Finite Elements Methods	(710) RAHUL RAJ Rahul.	Finite Elements Analysis as Integral part of Computer aided design <ul style="list-style-type: none"><li>* Geometry generation</li><li>* Finite elements analysis</li><li>* Kinematic analysis</li><li>* Automatic drafting</li></ul>	7-10-2017
03	Finite Elements Methods	(711) FIROZ KHAN Firoz Khan.	Introduction to matrices <ul style="list-style-type: none"><li>* Symmetric, diagonal and banded matrices, A storage scheme</li><li>* Metric equality addition and multiplication by a scalar</li></ul>	7-10-2017
04	Finite Elements Methods	(712) RAJAT PANDEY	Stiffness matrix and boundary conditions <ul style="list-style-type: none"><li>* Elements stiffness matrix</li><li>* Global stiffness matrix</li><li>* Boundary conditions</li></ul>	14-10-2017

# School of Aeronautics (Neemrana)

4, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
05	Finite Elements Methods	(715) NAQVI SAIYAD  S. Nazam	Raleigh Ritz method  * Energy principle * Potential energy function * Virtual work principle	7-10-2017
06	Finite Elements Methods	(717) SAHIL  Sahil	Shape function  * Approximation of continues models * Discretisation and interpolation * Linear, quadratic shape functions	7-10-2017
07	Finite Elements Methods	(719) NAVJOT	Isoparametric formulations  * Elements types * Displacement function * Stress strain function * element equations	7-10-2017
08	Finite Elements Methods	(720) TAQVI HAIDAR  Haider	Weighted residual methods  * General formulation * Sub domain method * Collocation method * Least squares method	7-10-2017

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I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
09	Finite Elements Methods	(721) VIVEK <i>Vivek</i>	Galerkin method  * Weak formulation * Dimension reduction * Orthogonality * Quasi-best approximation	14-10-2017
10	Finite Elements Methods	(722) VAISHALI <i>Vaishali</i>	Gauss quadrature formulas  * One dimensional Numerical Integration	14-10-2017
11	Finite Elements Methods	(723) HIMALAY <i>Himalay</i>	Lagrange's Interpolation formula  * One and two independent variable * Higher order elements	14-10-2017
12	Finite Elements Methods	(724) DABHI NILESH <i>Nilesh</i>	Convergence of FE solution  * The model problem and definition of convergence * Monotonic convergence * Basic of convergence, the effect of elements distortions * Order of convergence, the effect of elements distortions	14-10-2017

# School of Aeronautics (Neemrana)

04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan




B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
13	Finite Elements Methods	(725) PALKI	Applications and advantages of FEM	14-10-2017
14	Finite Elements Methods	(729) JAY PRAKASH	Calculation of natural frequencies and nodes using FEM	14-10-2017
15	Finite Elements Methods	(730) ROHIT KUMAR  Rohit Kumar.	P and h methods of mesh refinement	14-10-2017

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I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan




B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Aircraft Stability and Control	(731) JOEL PEREIRA	Longitudinal static stability for wing and tail combination <ul style="list-style-type: none"> <li>* Force acting on combination</li> <li>* Moments acting on combination</li> <li>* Moments equation</li> <li>* Stability condition</li> </ul>	14-10-2017
02	Aircraft Stability and Control	(732) JENNIFER R 	Factors affecting the tail contribution in longitudinal static stability <ul style="list-style-type: none"> <li>* <math>\frac{d\xi}{d\alpha}</math> factor</li> <li>* Dynamic pressure on tail plane</li> <li>* Tail volume coefficient.</li> </ul>	21-10-2017
03	Aircraft Stability and Control	(733) PRASHANT GUPTA 	Neutral point and static margin <ul style="list-style-type: none"> <li>* What is neutral point?</li> <li>* cause of movement of C.G</li> <li>* Effect of after movement of c.g.</li> <li>* Static margin in stick fixed /stick free condition</li> <li>* Comparison</li> </ul>	21-10-2017
04	Aircraft Stability and Control	(734) SALEEM MOHAMAD 	Stick free static longitudinal stability <ul style="list-style-type: none"> <li>* What is stick free condition</li> <li>* What is elevator hinge moment coefficient</li> <li>* What is wing moment constants</li> </ul>	21-10-2017

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B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
05	Aircraft Stability and Control	(739) ALIRAZA ARIF 	Phugoid * What is phugoid * Cause of phugoid * Recovery from phugoid	21-10-2017
06	Aircraft Stability and Control	(741) RADHIKA 	Damping effects in Lateral motion due to disturbance * Disturbance in Lateral * Effect in roll * Damping in roll * Cause of damping in roll	21-10-2017
07	Aircraft Stability and Control	(742) SONIL KUMAR	Damping effect in directional disturbances * Cause of disturbance * Effect of disturbance * Cause of damping effect * Control involving in restoring the aircraft	21-10-2017
08	Aircraft Stability and Control	(745) AJEET SINGH 	Effects of wing in Lateral and directional static stability * Wing dihedral effect * Wing sweep back effect	21-10-2017
09	Aircraft Stability and Control	(747) ATHARV	Uses of rudder as a control to- * Control direction on ground * Recovery from a spin	4-11-2017

# School of Aeronautics (Neemrana)

I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
10	Aircraft Stability and Control	(749) GAURAV SINGH	<ul style="list-style-type: none"> <li>* To prevent sideslip in a co- ordinate turn</li> <li>* To induce sideslip in stall turn</li> <li>* To overcome asymmetric power effects</li> <li>* To overcome adverse yawing effects due to rolling or to use of aileron.</li> </ul> <p>Cross coupling</p> <ul style="list-style-type: none"> <li>* What is cross coupling effects?</li> <li>* Effects of aileron deflection on yawing moment</li> <li>* Reduction of cross coupling effects by using Frise aileron</li> <li>* Effects of rudder deflection on rolling moments.</li> </ul>	4-11-2018
11	Aircraft Stability and Control	(752) SURAJ	<p>Dynamic effects</p> <ul style="list-style-type: none"> <li>* Directional divergence                             <ul style="list-style-type: none"> <li>- Cause</li> <li>- Effects</li> <li>- Remedy/ recovery</li> </ul> </li> <li>* Spiral divergence                             <ul style="list-style-type: none"> <li>- Cause</li> <li>- Effects</li> <li>- Recovery</li> </ul> </li> <li>* Autorotation                             <ul style="list-style-type: none"> <li>- Cause</li> </ul> </li> </ul>	4-11-2018

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04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
12	Aircraft Stability and Control	(753) RAGINI <i>Ragini</i>	<ul style="list-style-type: none"> <li>- Effects</li> <li>- Recovery</li> </ul> <p>Autorotation</p> <ul style="list-style-type: none"> <li>* Cause</li> <li>* Effects</li> <li>* Recovery</li> </ul>	4-11-2017
13	Aircraft Stability and Control	(754) VISHAL	<p>Aerodynamic Balancing</p> <ul style="list-style-type: none"> <li>* What is aerodynamic balancing</li> <li>* Types of aerodynamic balancing features</li> <li>- Set back hinge</li> <li>- Horn balance</li> <li>- Frise aileron</li> <li>- Sealed nose balance</li> </ul>	4-11-2017
14	Aircraft Stability and Control	(756) GITESH RAO	<p>Aero elastic effects</p> <ul style="list-style-type: none"> <li>* Cause of aero elastic effects</li> <li>* Wing Torsional divergence</li> <li>* Control reversal</li> <li>* Control surface flutter</li> </ul>	4-11-2017
15	Aircraft Stability and Control	(764) GOPAL JAT <i>Gopal</i>	<p>Trim Tab</p> <ul style="list-style-type: none"> <li>* Purpose of Trim tabs</li> <li>* Types of Trim tabs with principle of operations</li> </ul>	4-11-2017



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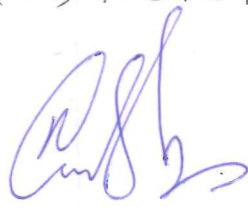

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
16	Aircraft Stability and Control	(770) <del>Not Present</del> SHASHIKANT BHARWANI	Aircraft flight control system  - Geared balanced Tab - Spring Tab - Servo Tab  * Flight control surfaces * Cockpit controls * Secondary controls * Types - Mechanical - Hydro mechanical - Artificial feel devices - Stick shaker - Fly by wire	<del>Not Present</del> 4-11-2017

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I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Aerodynamics-I	(773) ANUS KUMAR 	Basic Aerodynamics equations <ul style="list-style-type: none"><li>* Continuity equation</li><li>* Momentum equation</li><li>* Energy equation</li><li>* State equation</li><li>* Velocity of sound</li></ul>	11-11-2017
02	Aerodynamics-I	(774) NIKET 	Nozzles <ul style="list-style-type: none"><li>* Subsonic Nozzle</li><li>* Supersonic Nozzle</li><li>* Throat</li><li>* Converging passages</li><li>* Diverging passages</li></ul>	11-11-2017
03	Aerodynamics-I	(778) ATUL TRIPHI 	Diffusers <ul style="list-style-type: none"><li>* Subsonic diffuser</li><li>* Supersonic diffuser</li><li>* Converging passages</li><li>* Diverging passages</li><li>* Throat</li></ul>	11-11-2017

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04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
04	Aerodynamics-I	(77) SHUBHAM SINHA	Normal shock <ul style="list-style-type: none"> <li>* Parental equation</li> <li>* Pressure relation</li> <li>* Temperature relation</li> <li>* Density relation</li> <li>* Rankine-Huguenot relation</li> </ul>	11-11-2017
05	Aerodynamics-I	(78) AKSHYA BAIKWA <i>Akshya</i>	Oblique shock <ul style="list-style-type: none"> <li>* Shock generation</li> <li>* Pressure relation</li> <li>* Temperature relation</li> <li>* Density relation</li> <li>* Pressure turning angle</li> </ul>	11-11-2017
06	Aerodynamics-I	(783) SHUBHAM NAIR <i>Shair</i>	Expansion waves <ul style="list-style-type: none"> <li>* Introduction to Expansion Fans</li> <li>* Odograph (Expansion)</li> <li>* Reflection and interaction of shocks</li> <li>* Convex corner flow</li> <li>* Pressure relation</li> </ul>	11-11-2017

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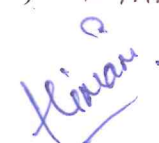
B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
07	Aerodynamics-I	(785) ISWARYA LEXMI	High speed Aerofoil <ul style="list-style-type: none"><li>* Critical Mach number</li><li>* Drag divergent Mach number</li><li>* Sweep back wing</li><li>* Sweep forward wing</li><li>* Transonic area rule</li></ul>	11-11-2017
08	Aerodynamics-I	(786) SYED AHRAR <u>S. Ahrar</u>	Characteristic of swept wing <ul style="list-style-type: none"><li>* Effect of Thickness</li><li>* Effect of camber</li><li>* Effect of aspect ratio</li><li>* Tip effect</li><li>* Drag estimation of wing</li></ul>	11-11-2017
09	Aerodynamics-I	(787) RAJA KUMAR <u>R. Kumar</u>	Linearize supersonic flow theory <ul style="list-style-type: none"><li>* Lift in supersonic flow</li><li>* Drag in supersonic flow</li><li>* Pitching moment in supersonic flow</li><li>* Centre of pressure in supersonic flow</li><li>* Critical much number</li></ul>	11-11-2017

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-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
10	Aerodynamics-I	(788) ANANTHU	Method of characteristics <ul style="list-style-type: none"> <li>* Basic elements of method of characteristics</li> <li>* Characteristics lines</li> <li>* Ordinary differential equation</li> <li>* Internal point</li> <li>* Wall point</li> </ul>	18-11-2017
11	Aerodynamics-I	(789) DHARMENDRA 	Linearized velocity potential equation <ul style="list-style-type: none"> <li>* Perturbation velocity</li> <li>* Linear partial differential equation</li> <li>* Small perturbation</li> <li>* Linearized pressure coefficient</li> <li>* Linearized theory for small perturbation</li> </ul>	18-11-2017
12	Aerodynamics-I	(790) HIMANI PANDYA 	Prandtl's glauert compressibility correction <ul style="list-style-type: none"> <li>* Correction for <math>C_p</math></li> <li>* Correction for <math>C_l</math></li> <li>* Correction for <math>C_m</math></li> <li>* Improved compressibility correction</li> </ul>	18-11-2017

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I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan


B.Tech. Semester -7

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13	Aerodynamics-I	(792) —	Supersonic wind Tunnel  <ul style="list-style-type: none"> <li>* Continuous type</li> <li>* Intermittent type</li> <li>* Advantages</li> <li>* Disadvantages</li> <li>* Losses in supersonic Tunnel</li> </ul>	
14	Aerodynamics-I	(793) VIKASH K <sub>r</sub> <del>ABHIRANJAN</del> Vikash	Hypersonic wind Tunnel  <ul style="list-style-type: none"> <li>* Hypersonic Tunnel design details</li> <li>* Hypersonic Nozzle</li> <li>* Test section</li> <li>* Mach number determination</li> <li>* Calibration of hypersonic Tunnel</li> </ul>	18-11-2017
15	Aerodynamics-I	(799) ABHIRANJAN K <sub>r</sub>	Hyper velocity facilities  <ul style="list-style-type: none"> <li>* Hot shot Tunnels</li> <li>* Plasma Jets</li> <li>* Shock tubes</li> <li>* Shock Tunnels</li> <li>* Light gas Tunnels</li> </ul>	18-11-2017

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1-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester -7

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Aircraft Performance	(800) PRITHVI Kr. 	International Standard Atmosphere * Troposphere * Stratosphere * Mesosphere * Thermosphere * Exosphere	18-11-2017
02	Aircraft Performance	801 AAKASH TYAGI	Altitude * Geopotential Altitude * Geometric Altitude * Pressure Altitude * Temperature Altitude * Density Altitude	18-11-2017
03	Aircraft Performance	(809) RAHUL Kr.  Rahul Kumar.	Airspeed Indicator * Indicator air speed * Computed air speed * Calibrated air speed * Equivalent air speed * True air speed	18-11-2017

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
04	Aircraft Performance	(812) MANOJ PAL <i>Manojpal</i>	Primary Flight Instrument <ul style="list-style-type: none"><li>* Altimeter</li><li>* Airspeed indicator</li><li>* Vertical speed indicator</li><li>* Turn-bank indicator</li><li>* Gyroscope</li></ul>	18-11-2017
05	Aircraft Performance		Drag <ul style="list-style-type: none"><li>* Profile drag</li><li>* Wave drag</li><li>* Induced drag</li><li>* Drag at zero lift condition</li><li>* Drag polar</li></ul>	
06	Aircraft Performance		Pressure distribution over airfoil <ul style="list-style-type: none"><li>* At 4° angle of attack</li><li>* At 0° angle of attack</li><li>* At 4° ngle of attack</li><li>* At 12° angle of attack</li><li>* At 20° angle of attack</li></ul>	