Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be-University under section 3 of UGC Act 1956)
BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF AERONAUTICAL ENGINEERING

NAAC
NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

Dr. M. Sundararaj M.E, Ph.D
Head

03/01/2018

Ref No:Cir/Aero/2018/023

CIRCULAR

This is to intimate the students that Value Added Program titled "Remote Sensing and Digital Image Processing of Satellite Data" is scheduled to be conducted from 10.01.2018 . The course will be for a duration of 30hours and will be conducted during weekends. Further Details can contact the Course Coordinator Dr.S.Elangovan. Professor and Dean Department of aeronautical Engineering.

Copy to:

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HOD/Aero

Dr. M. SUNDARARAJ, M.E.,Ph.D.,
HOD
Department of Aeronautical Engineering
Bharath Institute of Higher Education & Researc
(Declared as Deemed to be University U/S 3 of UGC Act, 195
Selaiyur, Chennai-600 073. INDIA

Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956) AERONAUTICAL ENGINEERING DEPT. Chennai-600 073.

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Department of Aeronautical Engineering

Value Added Course

Remote Sensing and Digital Signal Processing of Satelite Data

Objective :

The course provides basic understanding about satellite based Remote Sensing and Digital Image Processing technologies. Presently, remote sensing datasets available from various earth orbiting satellites are being used extensively in various domains including in Aeronautical engineering, Aerospace engineering civil engineering, water resources, earth sciences, transportation engineering, navigation etc. Google Earth has further made access to high spatial resolution remote sensing data available to non-experts with great ease. Knowledge of Digital Image Processing of satellite data allows to process raw satellite images for various applications.

PRE-REQUISITES: Current students of engineering students and current post graduate science students

Course Co-ordinator: Dr.S.Elangovan

COURSE LAYOUT

SNO	Date	Course Content	Duration	Instructor
1	10.01.2018	Introduction to Remote sensing and satellite based remote sensing, Different platforms of remote sensing	1 Hour	Dr.S.Elangovan, Professor & Dean Department of Aeronautical Engineering- BIHER
2	13.01.2018	EM spectrum, solar reflection and thermal emission remote sensing ,Interaction of EM radiation with atmosphere including atmospheric scattering, absorption and emission and Interaction mechanisms of EM radiation with ground, spectral response curves	3 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER
3	20.01.2018	Principles of image interpretation and Multi-spectral scanners and imaging devices , Salient characteristics of LANDSAT Sensors,IRS Sensors, Cartosat Sensors and ResourceSat Sensors	3 Hour	Mrs.philomena,Assistant Professor Department of ECE -BIHER

4	27.01.2018	Image characteristics and different resolutions in Remote Sensing, Image interpretation of different geological landforms, rock types and structures	3 Hour	Mrs.philomena,Assistant Professor Department of ECE -BIHER
5	03.02.2018	Remote Sensing integration with GIS and GPS ,Georeferencing Technique Basic image enhancement techniques and Spatial filtering techniques	3 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER
6	10.02.2018	Image classification techniques, InSAR Technique and its applications,Hyperspectral Remote Sensing, Integrated applications of RS and GIS in groundwater studies	3 Hour	Mrs.philomena,Assistant Professor Department of ECE -BIHER
7	17.02.2018	Limitations of Remote Sensing Technique,Method of Representation of remote sensing image ,Classification of various techniques of Image acquisition	3 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER
8	24.02.2018	Importance of digital image processing, Image characteristics and different resolutions in Remote Sensing , EM spectrum, solar reflection and thermal emission remote sensing	3 Hour	Mrs.philomena,Assistant Professor Department of ECE -BIHER
9	03.03.2018	Colour representations and transforms, Image Histograms and statistics, Geometric transformations /Georeferencing Technique and Image enhancement techniques –I & II	3 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER
10	10.03.2018	Multispectral transforms: scatter plot, principal component analysis and decorrelation stretch Spatial filtering techniques Frequency domain - Fourier transformation Basic Image Compression techniques and different image file formats Image classification techniques	3 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER
11	17.03.2018	Principles of image interpretation, SAR Interferometry (InSAR) Technique,Image merging and mosaicking techniques,Applications of Image Analysis and Limitations and future of Digital Image Processing Technique	2 Hour	Mrs.ArulSelvi, Assistant Professor Department of ECE -BIHER

BOOKS AND REFERENCES	
1	James B. Campbell and Randolph H. Wynne, "Introduction to Remote Sensing", (5th Ed.), The Guildford Press, New York, 2012.
2	Lillesand, T.M., Kiefer, R.W. and Chapman, J.W., "Remote Sensing and Image Interpretation", (5th Ed.), John Wiley & Sons, 2007.
3	Gupta, R. P., "Remote Sensing Geology", 2nd Ed., Springer, 2003.
4	Drury, S. A., "Image Interpretation in Geology", 2nd Ed, Allen & Unwin, 1993.
5	Cracknell, A.P., "Introduction to Remote Sensing", (2nd Ed.), Tylor & Francis, London, 1991.
6	Gonzalez, Rafael C. and Richard E. Woods "Digital Image Processing", (3rd Edition) Pearson Education, London.

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Department of Aeronautical Engineering

Value Added Course

Remote Sensing And Digital Image Processing Of Satellite Data

List of students Registered on 10.01.2018

SNO	Reg NO	Name of the Student
1	U14AE009	ANNAPAREDDY NAGA SAI SRINIVAS
2	U14AE016	BATTULA SARAN KUMAR
3	U14AE018	BONALA KAMSALA RAGHAVENDRA
4	U14AE024	GANGIPELLI VINEETH
5	U14AE027	GUMMADI SANTOSH KUMAR
6	U14AE034	JOHNMETHUSALA E
7	U14AE036	SHILPA KONGARA
8	U14AE043	MOHDREHAN
9	U14AE044	M UDAY TEJA
10	U14AE045	MONGAM NARENDRA KUMAR
11	U14AE050	NARHARI RAMEKAR
12	U14AE052	NISHANT SHUKLA
13	U14AE053	SUSMITHA PADAMATI
14	U14AE054	PALAKADA BHAVANA
15	U14AE057	PODILAPU RAJA SEKHAR
16	U14AE058	POONAM SHARMA.G
17	U14AE059	PRAGATHY.D
18	U14AE060	PRATHAP L
19	U14AE065	PANDARI SAI MANIKANTA PRASANNA KUMAR
20	U14AE067	B.SATHISH KUMAR
21	U14EC002	AARTHI.P
22	U14EC020	BETHALA MOURYA
23	U14EC066	MANAM KOKILA.
24	U14EC084	MELARGOAD KALATTAR RAKESH
25	U14EC088	VASIREDDY MOUNIKA.
26	U14EC090	MUTYALA SAI HARISHITHA
27	U14EC092	NAGUNOORI SANKIRTH KUMAR
28	U14EC095	NARESH .I
29	U14EC097	MATHEGAM NIHAL REDDY
30	U14CS007	ABHISHEK MANDURI
31	U14CS014	ANGELIN .R
32	U14CS027	BALAJI SINGH. T
33	U14CS067	KARTHICK.K
34	U14CS106	MUGANTH.R.
35	U14CS171	SHARSHI KANT PRASAD
36	U14CS148	RAMYA.B
37	U14MT018	RAYA VENKATA RAMANJANEYULU REDDY

38	U14MT026	VIGNESH.R

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Value Added Course

Remote Sensing and Digital Signal Processing of Satellite Data

Our Instructor" Mrs.philomena ,Assistant Professor Department of ECE –BIHER" is Handling the session to our registered participants on Remote sensing

Participant Feedback Form

(On course completion)

Date ..17.03.2018...

Course ..Remote..sensing..and..digital..signal..Processing..of..Satellite..data

Student Name (optional) ....SHILPA..KONGARA.....

Student ID (optional) .....U.M.A.E..034.....

a) Helpful and knowledgeable staff:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

b) Staff friendliness:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

C) Ease of registration:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

2. Is there anything we can improve with our registration process?

.....

B. The Training Facility

3. How satisfied were you with the training facility on the follow

a) Cleanliness of facility:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

b) Comfort of training room:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

4. Is there anything we can improve with any of the above?

.....

Participant Feedback Form

(On course completion)

Date ..17.03.2018

Course ..REMOTE SENSING & DIGITAL SIGNAL Processing of Satellite data.

Student Name (optional) .....ANNIL KRISHNAN. K.....

Student ID (optional) .....U.14.CS.016.....

a) Helpful and knowledgeable staff:

☑ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

b) Staff friendliness:

☑ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

C) Ease of registration:

☐ Very satisfied ☑ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

2. Is there anything we can improve with our registration process?

.....—.....

B. The Training Facility

3. How satisfied were you with the training facility on the follow

a) Cleanliness of facility:

☑ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

b) Comfort of training room:

☑ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Not satisfied

4. Is there anything we can improve with any of the above?

.....session need more hours.....

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Certificate

OF PARTICIPATION

THIS IS CERTIFY THAT

CHALUVADI DIVYA BHARATHI
U14EC023

has undertaken 30 Hours course on **"Remote Sensing and Digital Processing of Satellite data"** Organized by Department of Aeronautical Engineering, BIHER from 10.01.2018 to 17.03.2018.

Convenor

HOD/Aero

Bharath

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Department of Aeronautical Engineering

Certificate

OF PARTICIPATION

THIS IS CERTIFY THAT

ATUL ANAND U14CS024

has undertaken 30 Hours course on **"Remote Sensing and Digital Processing of Satellite data"** Organized by Department of Aeronautical Engineering, BIHER from 10.01.2018 to 17.03.2018.

Convenor

Dean/Aero