



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
Kakinada-533003, Andhra Pradesh (India)

**Comparison of Program Structure R16 with R19**

Program Code	Program Name	Total No. of Courses			No of Subjects		Total Courses	Percentage %
		R16	R19	Added in (R19)	Deleted (R16)	Content revised more than 20%		
33	M.Tech – Remote Sensing	19	20	8	1	3	12	60%

*MMV*  
Coordinator

*P. Subbarao*  
Chairman, Board of Studies

*Handwritten Signature*  
REGISTRAR  
J.N.T. University Kakinada  
Kakinada-533003



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

Kakinada-533003, Andhra Pradesh (India)

## Comparison of Course Structure R16 with R19

Program Code: 33

Program Name: M.Tech - Remote Sensing

Year : 1

Semester: 1

R16					R19					Remarks				
Course code	Course name	L	T	P	C	Course code	Course name	L	T	P	C	New Course? (R19)	Deleted Course? (R16)	Content Revision %
1	Principles of Photogrammetry	4			3	Core-1	Remote Sensing	3			3			10
2	Principles of Remote Sensing	4			3	Core-2	Geographical Information Systems	3			3			10
3	Principles of Geographical Information Systems	4			3	Elective-1	a) Photogrammetry b) Earth Systems c) Water Resources Management	3			3			30
4	Earth Systems	4			3	Elective-2	a) Object Oriented programming b) Principles of Geodatabase c) Geo-Statistical Methods	3			3			20
5	Object Oriented programming through JAVA	4			3	Core	Research Methodology and IPR	2			2	Yes		
6	<b>Elective-1</b> 1. Data Base Management Systems 2. Principles of Geo-data base 3. Web Technologies	4			3	Lab-1	Remote Sensing Laboratory			4	2			10
7	Map Analysis & Photogrammetry Lab & Satellite Image Interpretation Lab			2	2	Lab-2	Geographical Information Systems Laboratory			4	2	Yes		
						Audit -1	Audit Course -1	2			0	Yes		
<b>TOTAL</b>											18	3		1

Program Code: 33

Program Name: M.Tech - Remote Sensing

Year : 1

Semester: 2

R16					R19					Remarks				
Course code	Course name	L	T	P	C	Course code	Course name	L	T	P	C	New Course? (R19)	Deleted Course? (R16)	Content Revision %
1	Digital Image Processing	4			3	Core-3	RS & GIS Applications in Earth Sciences	3			3			15
2	Advanced Remote Sensing	4			3	Core-4	Satellite Image Processing	3			3			20
3	Internet GIS	4			3	Elective-3	a) Global Navigational Satellite System b) Geospatial Data Processing and Modeling c) Climate Systems	3			3			30
4	R.S. & GIS Applications In Earth Sciences	4			3	Elective-4	a) Advanced Remote Sensing b) Web & Mobile GIS c) Geo-Spatial applications for Coastal Zone Management	3			3			30
5	Geodesy & GNSS	4			3	Lab-3	Satellite Image Processing Laboratory	2			2			10
6	<b>Elective-II</b> 1. Remote Sensing & GIS for Disaster Management 2. Data Warehousing & Data Mining 3) Advanced surveying and cartography 4) Advanced Photogrammetry 5) Geo-statistical Methods	4			3	Lab-4	GeoSpatial Simulation Laboratory			4	2	Yes		
7	Digital Image Processing Lab & GIS & GPS Lab			2	2	Core	Mini Project with Seminar			4	2	Yes		
						Audit – 2	Audit Course-2	2			0	Yes		
<b>TOTAL</b>					20	<b>TOTAL</b>					18	3		2

Program Code: 33

Program Name: M.Tech - Remote Sensing

Year : 2

Semester: 3

R16					R19					Remarks				
Course code	Course name	L	T	P	C	Course code	Course name	L	T	P	C	New Course? (R19)	Deleted Course? (R16)	Content Revision %
1	Comprehensive Viva-Voce				2	Elective-V	a) MOOCS b) Soft Computing Techniques c) Environmental Impact Assessment and Management using RS & GIS d) Urban & Regional Planning using Geospatial technologies				3	Yes		
2	Seminar – I				2	Open Elective	a) MOOCS b) Fundamentals of Remote Sensing & GIS c) Application of Remote Sensing in Environmental Management d) Internet of Things e) Business Analytics f) Industrial Safety g) Operations Research h) Cost Management of Engineering Projects i) Composite Materials j) Waste to Energy				3	Yes		
3	Project Work Part – I				16	Dissertation	Dissertation Phase-I /Industrial Project (To be continued and Evaluated next Semester)*				10			
<b>TOTAL</b>											16	2		

Program Code: 33

Program Name: M.Tech - Remote Sensing

Year : 2

Semester: 4

R16					R19					Remarks				
Course code	Course name	L	T	P	C	Course code	Course name	L	T	P	C	New Course? (R19)	Deleted Course? (R16)	Content Revision %
1	Seminar – II				2	Dissertation	Dissertation Phase II (Continued from III semester)				16		Yes	
2	Project Work Part – II				18									
<b>TOTAL</b>											16		1	

Coordinator

Chairman, Board of Studies