

School of Earth Science
Solapur University
M.Sc. Applied Geology (CBCS Syllabus)
w.e.f. 2018-19

Sem		TITLE OF THE PAPER	Semester Exam			L	T	P	Credit
First	Code	Hard Core	Theory	IA	Total				
AGT	HCT1.1	Mineralogy and Optics (3:1)	70	30	100	4			4
	HCT1.2	Geochemistry	70	30	100	4			4
	HCT1.3	Sedimentology and Palaeontology (2:2)	70	30	100	4			4
		Soft Core (any One)							
	SCT1.1	Economic Geology	70	30	100	4			4
	SCT1.2	Structural Geology and Morphotectonics (2:2)	70	30	100	4			
		Practical (Hard Core)							
	HCP1.1	Practical HCP1.1	35	15	50			2	6
	HCP1.2	Practical HCP1.2	35	15	50			2	
	HCP1.3	Practical HCP1.3	35	15	50			2	
		Soft Core (Any One)							
	SCP1.1	Practical SCP1.1	35	15	50			2	2
	SCP1.2	Practical SCP1.2	35	15	50			2	
		Soft skill ICT, Scientific English, Tutorial			25		1		1
		Total for First Semester	420	180	625				25
Second	Code	Hard Core	Theory	IA	Total				
AGT	HCT2.1	Igneous and Metamorphic Petrology (2:2)	70	30	100	4			4
	HCT2.2	Indian Stratigraphy	70	30	100	4			4
	*HCT/P 2.3	Communicate in English Confidently	55	20	75	3		1	3
		Soft Core (any One)							
	SCT2.1	Hydrogeology	70	30	100	4			4
	SCT2.2	Geotechnical Engineering	70	30	100	4			
		Open Elective (Any One)							
	OET2.1	Natural Resource Management	70	30	100	4			4
	OET2.2	Watershed Management	70	30	100	4			
		Practical (Hard Core)							
	HCP2.1	Practical HCP2.1	35	15	50			2	4
	HCP2.2	Practical HCP2.2	35	15	50			2	
		Practical (Soft Core) (any one)							

	SCP2.1	Practical SCP2.1	35	15	50			2	2
	SCP2.2	Practical SCP2.2	35	15	50			2	
		Practical Open Elective(any one)							
	OEP2.1	Practical OEP2.1	35	15	50			2	2
	OEP2.2	Practical OEP2.2	35	15	50			2	
		Soft skill ICT, Scientific English Tour and Tour report , Tutorial			25		1		1
		Total for Second Semester	420	180	625				25

*Fieldwork of 15-21 days is compulsory. The field work may be stretch or divided into parts in the academic year

Third	Code	Hard Core	Theory	IA	Total				
AGT	HCT3.1	Mineral Exploration	70	30	100	4			4
	HCT3.2	Geotectonic and Physical Oceanography	70	30	100	4			4
	*HCT/P 3.3	Technical English Communication Skills	55	20	75	3		1	3
		Soft Core (any One)							
	SCT3.1	Engineering Geology and Mining Geology (2:2)	70	30	100	4			4
	SCT3.2	Climatology & Planetary Science	70	30	100	4			
		Open Elective (Any One)							
	OET3.1	Research Methodology	70	30	100	4			4
	OET3.2	Geoarchaeology	70	30	100	4			
		Practical (Hard Core)							
	HCP3.1	Practical HCP3.1	35	15	50			2	4
	HCP3.2	Practical HCP3.2	35	15	50			2	
		Practical (Soft Core) (any one)							
	SCP3.1	Practical SCP3.1	35	15	50			2	2
	SCP3.2	Practical SCP3.2	35	15	50			2	
		Practical Open Elective(any one)							
	OEP3.1	Practical OEP3.1	35	15	50			2	2
	OEP3.2	Practical OEP3.2	35	15	50			2	
		Soft skill ICT, Scientific English, Tutorial			25		1		1
		Total for Third Semester	420	180	625				25

Fourth	Code	Hard Core	Theory	IA	Total				
AGT	HCT4.1	Environmental Geology and Disaster Management (2:2)	70	30	100	4			4

	HCT4.2	Remote Sensing and GIS	70	30	100	4			4
	HCT4.3	Fuel Geology	70	30	100	4			4
		Soft Core (any One)							
	SCT4.1	Dissertation	70	30	100	4			4
	SCT4.2	Gemmology	70	30	100	4			
		Practical (Hard Core)							
	HCP4.1	Practical HCP4.1	35	15	50			2	6
	HCP4.2	Practical HCP4.2	35	15	50			2	
	HCP4.3	Practical HCP4.3	35	15	50			2	
		Soft Core (Any One)							
	SCP4.1	Practical SCP4.1	35	15	50			2	2
	SCP4.2	Practical SCP4.2	35	15	50			2	
		Soft skill ICT, Scientific English Tour and Tour report , Tutorial			25		1		1
		Total for Fourth Semester	420	180	625				25

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TOTAL DURATION OF THE COURSE : 2 YEARS

N.B.: Each semester will have 1 credit (25 marks) for- field training for long tour/ in plant training/remote sensing institute visit or field work, data acquisition related to dissertation.

L= Lecture, **T =** Tutorials, **P =** Practical, **IA =** Internal Assessment,

4 Credits of Theory = 4 Hours of teaching per week

2 Credits of Practical = 4 hours per week

HCT = Hard core theory

SCT = Soft core theory

HCP = Hard core Practical

SCP = Soft core practical

OET = Open elective theory

OEP = Open elective Practical

* **HCT/P =** Hard Core Theory / Project

* **HCT/P** is mandatory for every student who seeks M.Sc. degree and has to earn 3 credits each in Sem. – II & Sem. – III. In order to Pass in the above course the students should secure at least 27 Marks for theory and 10 marks for Internal Assessment. However these credits will not be accumulated for CGPA. In case student fails in these he will be declared as fail.

School of Earth Sciences
Solapur University
M.Sc Environmental Science (CBCS Syllabus)
w.e.f. 2018-19

Sem		TITLE OF THE PAPER	Semester Exam			L	T	P	Credit
First	Code	Hard Core	Theory	IA	Total				
EST	HCT1.1	Fundamentals of Environment	70	30	100	4			4
	HCT1.2	Environmental chemistry	70	30	100	4			4
	HCT1.3	Computer Applications	70	30	100	4			4
		Soft Core (any One)							
	SCT1.1	Introduction to Geo-science	70	30	100	4			4
	SCT1.2	Geomorphology	70	30	100	4			
		Practical (Hard Core)							
	HCP1.1	Practical HCP1.1	35	15	50			2	6
	HCP1.2	Practical HCP1.2	35	15	50			2	
	HCP1.3	Practical HCP1.3	35	15	50			2	
		Soft Core (Any One)							
	SCP1.1	Practical SCP1.1	35	15	50			2	2
	SCP1.2	Practical SCP1.2	35	15	50			2	
		Soft skill ICT, Scientific English, Tutorial			25		1		1
		Total for First Semester	420	180	625				25
Second									
Second	Code	Hard Core	Theory	IA	Total				
EST	HCT2.1	Biodiversity and Conservation	70	30	100	4			4
	HCT2.2	Water and wastewater Engineering	70	30	100	4			4
	*HCT/P 2.3	Communicate in English Confidently	55	20	75	3		1	3
		Soft Core (any One)							
	SCT2.1	Remote sensing and GIS in Environmental science	70	30	100	4			4
	SCT2.2	Hydrogeology	70	30	100	4			
		Open Elective (Any One)							
	OET2.1	Analytical techniques and instrumentation	70	30	100	4			4
	OET2.2	Oceanography and marine biology	70	30	100	4			
		Practical (Hard Core)							

	HCP2.1	Practical HCP2.1	35	15	50			2	4
	HCP2.2	Practical HCP2.2	35	15	50			2	
		Practical (Soft Core) (any one)							
	SCP2.1	Practical SCP2.1	35	15	50			2	2
	SCP2.2	Practical SCP2.2	35	15	50			2	
		Practical Open Elective(any one)							
	OEP2.1	Practical OEP2.1	35	15	50			2	2
	OEP2.2	Practical OEP2.2	35	15	50			2	
		Soft skill ICT, Scientific English Tour and Tour report , Tutorial			25		1		1
		Total for Second Semester	420	180	625				25

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Third	Code	Hard Core	Theory	IA	Total				
EST	HCT3.1	Environmental pollution	70	30	100	4			4
	HCT3.2	Environmental biotechnology	70	30	100	4			4
	*HCT/P 3.3	Technical English Communication Skills	55	20	75	3		1	3
		Soft Core (any One)							
	SCT3.1	Environmental statistics	70	30	100	4			4
	SCT3.2	Digital image processing	70	30	100	4			
		Open Elective (Any One)							
	OET3.1	Research methodology	70	30	100	4			4
	OET3.2	Meteorology	70	30	100	4			
		Practical (Hard Core)							
	HCP3.1	Practical HCP3.1	35	15	50			2	4
	HCP3.2	Practical HCP3.2	35	15	50			2	
		Practical (Soft Core) (any one)							
	SCP3.1	Practical SCP3.1	35	15	50			2	2
	SCP3.2	Practical SCP3.2	35	15	50			2	
		Practical Open Elective(any one)							
	OEP3.1	Practical OEP3.1	35	15	50			2	2
	OEP3.2	Practical OEP3.2	35	15	50			2	
		Soft skill ICT, Scientific English, Tutorial			25		1		1
		Total for Third Semester	420	180	625				25

Fourth	Code	Hard Core	Theory	IA	Total				
EST	HCT4.1	Environmental policy, acts,	70	30	100	4			4

		Laws and environmental Management system						
	HCT4.2	Environmental toxicology and Safety	70	30	100	4		4
	HCT4.3	Environmental Impact Assessment and Environmental Audit	70	30	100	4		4
		Soft Core (any One)						
	SCT4.1	Dissertation	70	30	100	4		4
	SCT4.2	Environmental geology and Disaster Management	70	30	100	4		
		Practical (Hard Core)						
	HCP4.1	Practical HCP4.1	35	15	50		2	6
	HCP4.2	Practical HCP4.2	35	15	50		2	
	HCP4.3	Practical HCP4.3	35	15	50		2	
		Soft Core (Any One)						
	SCP4.1	Practical SCP4.1	35	15	50		2	2
	SCP4.2	Practical SCP4.2	35	15	50		2	
		Soft skill ICT, Scientific English Tour and Tour report , Tutorial			25		1	1
		Total for Fourth Semester	420	180	625			25
*Fieldwork of 10-15 days is compulsory. The fieldwork may be stretch or divided into parts in the academic year,								

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School of Earth Science
Solapur University
M.Sc Geoinformatics (CBCS Syllabus)
w.e.f. 2018-19

Sem		TITLE OF THE PAPER	Semester Exam			L	T	P	Credit
First	Code	Hard Core	Theory	IA	Total				
GIT	HCT1.1	Introduction To Geography (3:1)	70	30	100	4			4
	HCT1.2	Introduction To Geology	70	30	100	4			4
	HCT1.3	Geomorphology (2:2)	70	30	100	4			4
		Soft Core (Any One)							
	SCT1.1	Computer Application In Earth Sciences	70	30	100	4			4
	SCT1.2	Ocean Sciences (2:2)	70	30	100	4			
		Practical (Hard Core)							
	HCP1.1	Practical HCP1.1	35	15	50			2	6
	HCP1.2	Practical HCP1.2	35	15	50			2	
	HCP1.3	Practical HCP1.3	35	15	50			2	
		Soft Core (Any One)							
	SCP1.1	Practical SCP1.1	35	15	50			2	2
	SCP1.2	Practical SCP1.2	35	15	50			2	
		Soft Skill ICT, Scientific English, Tutorial			25		1		1
		Total For First Semester	420	180	625				25
Second	Code	Hard Core	Theory	IA	Total				
GIT	HCT2.1	Introductions To Remote Sensing (2:2)	70	30	100	4			4
	HCT2.2	Introduction To GIS And GPS	70	30	100	4			4
	*HCT/P 2.3	Communicate in English Confidently	55	20	75	3		1	3
		Soft Core (Any One)							
	SCT2.1	Digital Image Processing	70	30	100	4			4
	SCT2.2	C++ Programming	70	30	100	4			
		Open Elective (Any One)							
	OET2.1	Climatology	70	30	100	4			4
	OET2.2	Cartography And Map Analysis	70	30	100	4			
		Practical (Hard Core)							
	HCP2.1	Practical HCP2.1	35	15	50			2	4
	HCP2.2	Practical HCP2.2	35	15	50			2	
		Practical (Soft Core) (Any One)							

	SCP2.1	Practical SCP2.1	35	15	50			2	2
	SCP2.2	Practical SCP2.2	35	15	50			2	
		Practical Open Elective(Any One)							
	OEP2.1	Practical OEP2.1	35	15	50			2	2
	OEP2.2	Practical OEP2.2	35	15	50			2	
		Soft Skill ICT, Scientific English Tour And Tour Report , Tutorial			25		1		1
		Total For Second Semester	420	180	625				25

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Third	Code	Hard Core	Theory	IA	Total	L	T	P	Credit
GIT	HCT3.1	Spatial Analysis	70	30	100	4			4
	HCT3.2	Advanced Techniques In Remote Sensing	70	30	100	4			4
	*HCT/P 3.3	Technical English Communication Skills	55	20	75	3		1	3
		Soft Core (Any One)							
	SCT3.1	Advanced Techniques In GIS (2:2)	70	30	100	4			4
	SCT3.2	Atmospheric And Planetary Sciences	70	30	100	4			
		Open Elective (Any One)							
	OET3.1	Introduction to Statistical Methods	70	30	100	4			4
	OET3.2	Urban Geography	70	30	100	4			
		Practical (Hard Core)							
	HCP3.1	Practical HCP3.1	35	15	50			2	4
	HCP3.2	Practical HCP3.2	35	15	50			2	
		Practical (Soft Core) (Any One)							
	SCP3.1	Practical SCP3.1	35	15	50			2	2
	SCP3.2	Practical SCP3.2	35	15	50			2	
		Practical Open Elective(Any One)							
	OEP3.1	Practical OEP3.1	35	15	50			2	2
	OEP3.2	Practical OEP3.2	35	15	50			2	
		Soft Skill ICT, Scientific English, Tutorial			25		1		1
		Total For Third Semester	420	180	625				25

Fourth	Code	Hard Core	Theory	IA	Total	L	T	P	Credit
GIT	HCT4.1	Geoinformatics Approach For Natural Resource Management (2:2)	70	30	100	4			4
	HCT4.2	Applications of Rs & GIS In	70	30	100	4			4

		Disaster Management							
	HCT4.3	Web GIS	70	30	100	4			4
		Soft Core (Any One)							
	SCT4.1	Dissertation	70	30	100	4			4
	SCT4.2	Applications Of Rs & Gis In Land Evaluation	70	30	100	4			
		Practical (Hard Core)							
	HCP4.1	Practical HCP4.1	35	15	50			2	6
	HCP4.2	Practical HCP4.2	35	15	50			2	
	HCP4.3	Practical HCP4.3	35	15	50			2	
		Soft Core (Any One)							
	SCP4.1	Practical SCP4.1	35	15	50			2	2
	SCP4.2	Practical SCP4.2	35	15	50			2	
		Soft Skill ICT, Scientific English Tour And Tour Report , Tutorial			25		1		1
		Total for Fourth Semester	420	180	625				25
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