

## MGM University, Chhatrapati Sambhajanagar

**Name of Faculty:** Faculty of Science

**Name of the College/Institute/Department/School:** University Department of Basic and Applied Sciences

**Name of the Programme:** B.Sc /B.Sc. (Hons) / B.Sc (Hons with Research) Geology

**Programme Type (UG/PG):** UG

**Duration:** 6/8 Semester

First Year - Semester I												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML101	Earth System Science	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML102	Mineralogy & Mineral Optics	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP101	Mineralogy Lab	P	2	-	4	30	20	50	-	08	20
OE	MGMXXOEL1XX	*Open Elective - I	L	2	2	-	30	20	50	-	08	20
OE	MGMXXOEL1XX	*Open Elective - II	L	2	2	-	30	20	50	-	08	20
VSE	BSG43VSL101	Principle of Remote Sensing	L	2	2	-	30	20	50	-	08	20
SEC	BSG43SEP101	Cartography & GPS Lab.	P	2	-	4	30	20	50	-	08	20
AEC	MGMXXAELXXX	*Ability Enhancement Course I	L	2	2	-	30	20	50	-	08	20
VEC	MGMXXVELXXX	*Value Education Course 1	L	2	2	-	30	20	50	-	08	20
IKS	BSG43IKL101	Development of Science in India "Ancient to Modern"	L	2	2	-	30	20	50	-	08	20
CC	MGMXXCCPXXX	*Co-Curricular Course I	P	2	-	4	30	20	50	-	08	20
<b>Total=28</b>				<b>22</b>	<b>16</b>	<b>12</b>			<b>550</b>			

**Note:** \*To be chosen from MGM University, Basket

**Nature of Course:** L- Lecture, P-Practical, S-Seminar, J-Project, I-Internship, D-Dissertation,

**Course Category:** MM-Major Mandatory, ME-Major Elective, MI-Minor, OE-Generic / Open electives, VSC-Vocational skill course, SEC-Skill Enhancement course, AEC-Ability Enhancement course, IKS-Indian Knowledge system, VEC-Value Education course, OJT-On Job Training / Internship / Apprenticeship, FP-Field project, CEP-Community engagement and service, CC-Co-curricular Course, RM-Research methodology, RP-Research Project

## MGM University, Chhatrapati Sambhajnagar

First Year- Semester II												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML103	Geomorphology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML104	Igneous Petrology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP102	Igneous Petrology Lab	P	2	-	4	30	20	50	-	08	20
MI		*Minor I	L	2	2	-	30	20	50	-	08	20
OE	MGMXXOEX1XX	*Open Elective - III	L	2	2	-	30	20	50	-	08	20
OE	MGMXXOEX1XX	*Open Elective - IV	L	2	2	-	30	20	50	-	08	20
VSC	BSG43VSL102	Geographic Information System	L	2	2	-	30	20	50	-	08	20
SEC	BSG43SEP102	Google Earth Lab	P	2	-	4	30	20	50	-	08	20
AEC	MGMXXAELXXX	*Ability Enhancement Course II	L	2	2	-	30	20	50	-	08	20
VEC	MGMXXVELXXX	*Value Education Course II	L	2	2	-	30	20	50	-	08	20
CC	MGMXXCCPXXX	*Co-Curricular Course II	P	2	-	4	30	20	50	-	08	20
<b>Total=28</b>				<b>22</b>	<b>16</b>	<b>12</b>			<b>550</b>			

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**Nature of Course:**L- Lecture, P-Practical, S-Seminar, J-Project, I-Internship, D-Dissertation,

**Course Category:** MM-Major Mandatory, ME-Major Elective, MI-Minor, OE-Generic / Open electives, VSC-Vocational skill course, SEC-Skill Enhancement course, AEC-Ability Enhancement course, IKS-Indian Knowledge system, VEC-Value Education course, OJT-On Job Training / Internship / Apprenticeship, FP-Field project, CEP-Community engagement and service, CC-Co – curricular course, RM-Research methodology, RP-Research project

**Level 4.5 Award of UG certificate with 44 credits and an additional 4-credits core NSQF course / internship OR continue with major and minor.**

## MGM University, Chhatrapati Sambhajnagar

(Annexure I)

**List of Options to select from Bucket of Courses for Minor**

**provided in various categories:**

	<b>Major</b>
	Geology
<b>Minor options within Faculty of Basic and Applied Sciences</b>	Web Technology
	Animation
	Material Science
	Chemistry
	Geo-Informatics
	Mathematics
	Forensic Science
	Statistics
	Bioinformatics
	Food Nutrition and Dietetics

	<b>Faculty of Engineering and Technology</b>	<b>Faculty of Social Sciences &amp; Humanities</b>	<b>Faculty of Design</b>	<b>Faculty of Management and Commerce</b>	<b>Interdisciplinary Faculty</b>	<b>Performing Arts</b>
<b>Minor options from Other Faculty</b>	Geo-Informatics and Applications	Filmmaking	Product Design	Financial Management	Cosmetic Technology	Theatre Arts
	Data Science	Photography	Visual Communication	E-Commerce	Education	Dance
	IoT	Psychology	Contemporary Arts	International Business Management	Yog Sciences	Music
	Energy management	Economics	Interior Design	Hospitality Mgmt	Physical Education	Folk Art
	EV Technology	English	Fashion Technology	Travel and Tourism	Home Science	
	Drone Technology					
	Robotics Technology					
	Chemical Technology					

## MGM University, Chhatrapati Sambhajinagar

<b>Second Year- Semester III</b>												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML201	Sedimentary Petrology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML202	Metamorphic Petrology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML203	Structural Geology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP201	Structural Geology and Petrology Lab	P	2	-	4	30	20	50	-	08	20
MI		*Minor II	L	4	4	-	60	40	100	-	16	40
OE	MGMXXOEX1XX	*Open Elective – V	L	2	2	-	30	20	50	-	08	20
VSC	BSG43VSL102	Geosciences & Image Interpretation	L	2	2	-	30	20	50	-	08	20
AEC	MGMXXAELXXX	*Ability Enhancement Course III	L	2	2	-	30	20	50	-	08	20
FP	BSG43FPJ201	*Field Project I	J	2	-	4	30	20	50	-	08	20
CC	MGMXXCCPXXX	*Co-Curricular Activities III	P	2	-	4	30	20	50	-	08	20
<b>Total=28</b>				<b>22</b>	<b>16</b>	<b>12</b>			<b>550</b>			

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**Course Category:** MM-Major Mandatory, ME-Major Elective, MI-Minor, OE-Generic / Open electives, VSC-Vocational skill course, SEC-Skill Enhancement course, AEC-Ability Enhancement course, IKS-Indian Knowledge system, VEC-Value Education course, OJT-On Job Training / Internship / Apprenticeship, FP-Field project, CEP-Community engagement and service, CC-Co – curricular course, RM-Research methodology, RP-Research project

## MGM University, Chhatrapati Sambhajinagar

<b>Second Year- Semester IV</b>												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML204	Principles of Stratigraphy and Indian Stratigraphy	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML205	Paleontology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML206	Fundamentals of Geochemistry	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP202	Stratigraphy and Paleontology Lab.	P	2	-	4	30	20	50	-	08	20
MI		*Minor III	L	4	4	-	60	40	100	-	16	40
OE	MGMXXOEX1XX	*Open Elective - VI	L	2	2	-	30	20	50	-	08	20
SEC	BSG43SEP201	GIS and Geoscience Lab	P	2	-	4	30	20	50	-	08	20
AEC	MGMXXAELXXX	*Ability Enhancement Course IV	L	2	2	-	30	20	50	-	08	20
CEP	BSG43CEJ201	@Community Engagement Program	J	2	-	4	30	20	50	-	08	20
CC	MGMXXCCPXXX	*Co-Curricular Activities IV	P	2	-	4	30	20	50	-	08	20
<b>Total=30</b>				<b>22</b>	<b>14</b>	<b>16</b>			<b>550</b>			

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@ Community Engagement Program will consist of program for primary student about does and don't during Geological disaster.

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**Level 5 Award of UG Diploma with 88 credits and an additional 4-credits core NSQF course / internship OR continue with major and minor.**

## MGM University, Chhatrapati Sambhajinagar

Third Year- Semester V												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML301	Hydrogeology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML302	Economic Geology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML303	Environmental Geology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP301	Hydrogeology and Environmental Geology Lab	P	2	-	4	30	20	50	-	08	20
ME	BSG43MEL30X	\$Major Elective I	L	3	3	-	60	40	100	-	16	40
ME	BSG43MEP30X	\$Major Elective I	P	1	-	2	30	20	50	-	08	20
MI		*Minor IV	L	4	4		60	40	100	-	16	40
VSC	BSG43VSL301	Geoinformatics in Hydrocarbon and Energy Resources	L	2	2	-	30	20	50	-	08	20
VSC	BSG43VSL302	Geoinformatics in Geo-hazards	L	2	2	-	30	20	50	-	08	20
FP/CE	BSG43FPJ301	Field Project II	J	2	-	4	30	20	50	-	08	20
<b>Total=27</b>				<b>22</b>	<b>17</b>	<b>10</b>			<b>600</b>			

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## MGM University, Chhatrapati Sambhajanagar

<b>Third Year- Semester VI</b>												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML304	Petroleum Geology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML305	Exploration Geophysics	L	2	2	-	30	20	50	-	08	20
MM	BSG43MML306	Engineering Geology	L	2	2	-	30	20	50	-	08	20
MM	BSG43MMP301	Fuel geology Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MMP302	Engineering Geology Lab	P	2	-	4	30	20	50	-	08	20
ME	BSG43MEL30X	\$Major Elective II	L	3	3	-	60	40	100	-	16	40
ME	BSG43MEP30X	\$Major Elective II	P	1	-	2	30	20	50	-	08	20
MI		*Minor V	L	4	4	-	60	40	100	-	16	16
JT	BSG43JTI301	On Job Training	I	4	-	4	60	40	100	-	16	40
<b>Total=27</b>				<b>22</b>	<b>13</b>	<b>14</b>			<b>600</b>			

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**Level 5.5 Award of UG Degree with 132 credits and continue with major and minor for B.Sc Hons/B.Sc Hons with Research Degree**

## MGM University, Chhatrapati Sambhajanagar

Fourth Year- Semester VII												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML401	Applied Sedimentology and Basin Analysis	L	3	3	-	60	40	100	-	16	40
MM	BSG43MML402	Remote Sensing & GIS for Geo-resource evaluation	L	3	3	-	60	40	100	-	16	40
MM	BSG43MML403	Petroleum Geochemistry and Geochronology	L	3	3	-	60	40	100	-	16	40
MM	BSG43MMP401	Applied Sedimentology and Basin Analysis Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MMP402	Remote Sensing & GIS for Geo-resource evaluation Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MMP403	Petroleum Geochemistry and Geochronology Lab	P	1	-	2	30	20	50	-	08	20
MI	BSG43MEL40X	\$Major Elective III	L	3	3	-	60	40	100	-	16	40
MI	BSG43MEP40X	\$Major Elective III	P	1	-	2	30	20	50	-	08	20
RM	BSG43RML401	Research Methodology	L	4	4	-	60	40	100	-	16	40
<b>Total=28</b>				<b>22</b>	<b>16</b>	<b>12</b>			<b>700</b>			

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## MGM University, Chhatrapati Sambhajnagar

Fourth Year- Semester VIII												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML404	Rainwater Harvesting and Watershed Management	L	3	3	-	60	40	100	-	08	20
MM	BSG43MML405	Meteorology & Climate Change	L	3	3	-	60	40	100	-	08	20
MM	BSG43MML406	Soil Geoscience	L	3	3	-	60	40	100	-	08	20
MM	BSG43MML404	Rainwater Harvesting and Watershed Management Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MML405	Meteorology & Climate Change Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MML406	Soil Geoscience Lab	P	1	-	2	30	20	50	-	08	20
ME	BSG43MEL40X	\$Major Elective IV	L	3	3		60	40	100	-	16	40
ME	BSG43MEP40X	\$Major Elective IV	P	1	-	2	30	20	50	-	08	20
JT	BSG43JT1401	On Job Training	I	4	-	8	60	40	100	-	08	20
<b>Total=32</b>				<b>22</b>	<b>12</b>	<b>20</b>			<b>700</b>			

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**Level 6 Award of B.Sc. Hons degree with 176 credits**

## MGM University, Chhatrapati Sambhajnagar

Fourth Year- Semester VII												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML401	Applied Sedimentology and Basin Analysis	L	3	3	-	60	40	100	-	16	40
MM	BSG43MML402	Remote Sensing & GIS for Geo-resource evaluation	L	3	3	-	60	40	100	-	16	40
MM	BSG43MMP401	Applied Sedimentology and Basin Analysis lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MMP402	Remote Sensing & GIS for Geo-resource evaluation lab	P	2	-	4	30	20	50	-	08	20
MI	BSG43MEL40X	\$Major Elective III	L	3	3	-	60	40	100		16	40
MI	BSG43MEP40X	\$Major Elective III	P	1	-	2	30	20	50	-	08	20
RM	BSG43RML401	Research Methodology	L	4	4		60	40	100	-	16	40
RP	BSG43RPJ401	Research Project I	J	4	-	08	60	40	100	-	16	40
<b>Total=31</b>				<b>22</b>	<b>13</b>	<b>18</b>			<b>650</b>			

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Fourth Year- Semester VIII												
Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
MM	BSG43MML404	Rainwater Harvesting and Watershed Management	L	3	3	-	60	40	100	-	16	40
MM	BSG43MML405	Meteorology & Climate Change	L	3	3	-	60	40	100	-	16	40
MM	BSG43MML404	Rainwater Harvesting and Watershed Management Lab	P	2	-	4	30	20	50	-	08	20
MM	BSG43MML405	Meteorology & Climate Change Lab	P	2	-	4	30	20	50	-	08	20
ME	BSG43MEL40X	*Major Elective IV	L	3	3	-	60	40	100	-	16	40
ME	BSG43MEP40X	*Major Elective IV	P	1	-	2	30	20	50	-	08	20
RP	BSG43RPJ402	Research Project II	J	8	-	16	60	40	100	-	16	40
<b>Total= 35</b>				<b>22</b>	<b>09</b>	<b>26</b>			<b>550</b>			

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**Level 6 Award of B.Sc. Hons with research degree with 176 credits**