

महाराष्ट्र शासन
शासकीय विज्ञान महाविद्यालय, गडचिरोली

नॅक बंगलोर व्दारा पुनर्मुल्याकंन "ब" श्रेणी

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जा.क्र.शाविम/गड/२११ /२०१८

दिनांक :- १६/४/२०१८

प्रति,

माननीय समन्वयक,

रुसा, S.P.D. महाराष्ट्र राज्य, मुम्बई

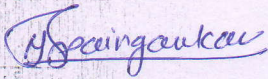
विषय :- आदर्श पदवी महाविद्यालयाचा प्रस्ताव सादर करण्याबाबत..

संदर्भ:-१.आपले पत्र क्र.राप्रसं/रुसा/२०१८-१९/३६ दिनांक-०९/०४/२०१८

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महोदय,

उपरोक्त संदर्भाकित विषयान्वये राष्ट्रीय उच्चतर अभियानाच्या दुसरा टप्पा (रुसा द्वितीय) मधील घटक क्रमांक-६ Aspirational Districts मधील विद्यमान महाविद्यालयांची श्रेणी सुधारणा करुन त्यांना आदर्श पदवी महाविद्यालय बनविण्यासाठीचा प्रस्ताव सविनय सादर करण्यात येत आहे.



डॉ.मंदार पैगणकर

रुसा समन्वयक



(डॉ.जी.एल.वाघमारे)

पाचार्य
Principal

शासकीय विज्ञान महाविद्यालय
Govt Science College
Gadchiroli
गडचिरोली

**PROPOSAL FOR UPGRADATION OF
GOVERNMENT SCIENCE COLLEGE GADCHIROLI
TO**

MODEL DEGREE COLLEGE GADCHIROLI

SUBMITTED TO

**RASHTRIYA UCHATAR SHIKSHA ABHIYAN (RUSA)
GOVERNMENT OF INDIA**

**THROUGH
DIRECTOR OF HIGHER EDUCATION, PUNE**

**FROM
PRINCIPAL,
GOVERNMENT SCIENCE COLLEGE GADCHIROLI**

PROPOSAL FOR UPGRADATION OF GOVERNMENT SCIENCE COLLEGE GADCHIROLI TO MODEL DEGREE COLLEGE GADCHIROLI

Gadchiroli is situated in the south-eastern part of Maharashtra state. Gadchiroli district shares its boundaries with Chattisgad and Telangana states. The district is categorized as tribal and undeveloped, with farming as the main occupation. Forests cover more than 79.36% of the hilly geographical of the district. Gadchiroli district is characterized by a large share of tribal population and suffer from severe gaps in educational infrastructure development. Gadchiroli is one of the 90-odd districts that are affected by Left Wing Extremism. As a result, the higher education infrastructure in the Gadchiroli district is inadequate and at a lower level than the rest of the areas.

A majority of students drop out after completing primary or secondary education and help parents in farming. Low levels of higher education literacy situation arose in the Gadchiroli district on account of absence of good education facilities. In Gadchiroli district most of the colleges are operated on non-grant basis. Very few colleges have post graduate courses and all are run on non-grant basis. The colleges imparting graduation and post graduate courses are located in Aheri, Armori, Wadasa or in Gadchiroli city. In these colleges hostel facilities are not available. Further pursuing the higher studies in these colleges are expensive as they are operated on non-grant basis. This resulted in to high dropout rates in college students belonging from remote areas. Similarly due to lack of basic amenities like roads, water and power, the higher education, however, remains a distant dream for students from Gadchiroli especially villages like Nelgunda, Binagunda, Bhatpar and others. Therefore, there is urgent need to bridge the gap in higher education literacy levels between the general population students and tribal students, through facilitating enrolment of tribal students for higher education. Similarly there is urgent need to work on literacy rate, gross enrolment ratio, dropout rates and Gender Parity Index of tribal education.

Government Science College Gadchiroli is a degree college in Gadchiroli district Maharashtra, India. The College is established on 11/09/1987 and run by Government of Maharashtra, Department of Higher and Technical Education, Mumbai (M.S.). It is the only Government College in this remote/tribal place of Gadchiroli running under-graduate and post graduate courses in sciences. The college has been under the jurisdiction of the Gondawana University, Gadchiroli. The college offers basic courses like Botany, Chemistry, Computer Science, Physics and Zoology at under-graduate level.

The college offers Masters Degree in Botany, Chemistry and Zoology on non-grant basis. Students from Aashti, Gondpimpri, Dhanora, Chamorshi and other remote areas pursuing graduate and post graduate degree in college. As Government Science College is only Government College in Gadchiroli district, students are relying on this College for pursuing the higher education. In this context Government Science College have to play an important role in improving the higher education status in Gadchiroli district.

Initiatives to nurture and facilitate the development of students of tribal area are one of the thrust areas of mission of Government Science College Gadchiroli. The initiative's goal is to build thriving and sustainable infrastructure facilities to create a community for addressing the various basic and fundamental issues of tribal society. Excellence and equity initiative of the Government Science College aims to support learning, teaching, sports and ethical culture in tribal population. Government Science College wishes to elevate the learning, teaching and research activities of low-income and tribal students. As part of a campaign to promote the learning and research in tribal population Government Science College wish to upgrade the existing college to the **Model Degree College** in Gadchiroli district.

For inclusion and success of under-represented students in the post graduate, research and the Career-related programs, the Government Science College wish to convert the existing non-grant M.Sc. courses in to fully aided post graduate courses. As the economy of Gadchiroli district is based on agriculture, we wish to start two new courses viz. Agricultural Biotechnology and Industrial Microbiology. In agricultural Biotechnology course, prominence will be given to application of biotechnology in agriculture. In Industrial microbiology course, emphasis will be given on techniques for screening of potential industrial microbes, water and food analysis, fermentation technology, antibiotics tests. These courses will be tailor made to address the fundamental problems related to agriculture in Gadchiroli area and also help improving the traditional agricultural practices. Further these courses will generate the manpower who are ready to work in biotechnology industry.

Research, both basic and applied, is fundamental to the mission of the Government Science College. Government Science college wishes to establish the interdisciplinary research centre with essential core facilities and emboldens innovation and economic development through strategic partnering with various research institutes, Universities and industry. The long term goal of Government Science College is to facilitate interdisciplinary research that will conserve the tribal knowledge and provide

innovative solutions to challenges of tribal area. Research that will be undertaken at the Government Science College, will primarily focused to address the contemporary issues related to tribal communities by linking the interdisciplinary knowledge to tribal knowledge. Thus, the Government Science College seeks to integrate academic rigor with technically sound and socially relevant research for tribal communities.

In RUSA Institutional Development Plan, which we have submitted earlier, we have proposed new facilities such as language laboratory, competitive examination section and up gradation of existing facilities of library, laboratory and physical education in to a state of art facilities. Model Degree college proposal along with Institutional Development Plan submitted to RUSA will make Government Science College a complete Institute which will provide quality education along with technically sound and socially relevant research to tribal communities. Further Government Science College will provide open access to research laboratories, library and e-resources to all research scholars and students of Gadchiroli and Chandrapur area, especially low-income and tribal area students.

Vision and mission of Government Science College Gadchiroli

Vision

- To be the educational institute of excellence in the field of Science education in tribal area
- To be an innovative and responsive to the educational and self development needs of the tribal communities
- To ensure the learning opportunities and promote the leadership, professional temperament and civic responsibilities among the tribal communities
- To contribute to society through the pursuit of education, learning, and research at the highest levels of excellence.

Mission

- To provide excellent education integrated with ethics, values, equality, compassion and social responsibilities
- To implement the student centric programmes which encourage the tribal students to excel in higher education
- To provide excellent teaching and perform quality research

Strategies

- Utilizing resources effectively to enhance the quality of teaching and learning
- Reaching out to more students in tribal area
- Collaborating with national institutes, Universities and industries to enhance the research environment

Institutional Basic information

1	Name of the Institute	Government Science College Gadchiroli
2	Address of the College	Chamorshi Road, Gadchiroli, 442605, Maharashtra, India
3	Is Institution approved by regulatory body?	Yes
4	Type of Institute:	Government Funded
5	Status of Institute:	Constituent Institute Affiliated to Gondwana University Gadchiroli
6	Year of establishment	11/09/1987
7	District	Gadchiroli
8	State	Maharashtra
9	Courses subject taught in the college under various faculties and for which affiliation is granted.	Course: Science Compulsory. English, Marathi, Hindi, Physics, Mathematics, Chemistry, Zoology, Computer Science ,Botany
10	Land available with the College	3.44 hectors
11	Whether land is owned by the Government of Maharashtra.	Yes
12	Hostel facility	Hostel facility is available Separate Boys and Girls hostel
13	Accommodation capacity	Boys Hostel = 50 students Girls Hostel = 50 students
14	Other facilities provided in the Hostel	Water heater, Clean water, water coolers, Dining room, recreation room, lockers etc.
15	Classrooms	14
16	Other facilities provided in the classrooms	Few classrooms equipped with LCD projector
17	Laboratories	Total 5; Botany, Computer Science, Chemistry, Physics, Zoology
18	Other facilities provided in the laboratories	Laboratory Equipment, LCD projector, Interactive boards etc.
19	Area of laboratories	Botany = 2880 sq. feet Computer Science = 1200 sq. feet Chemistry = 2880 sq. feet Physics = 2880 sq. feet Zoology = 2880 sq. feet
20	Library	Books = 22192 Periodicals =12 Science Journals =12 Magazines = 10
21	Other facilities provided in the library	Reading room capacity 120 students Bar code scanner, Server, SOUL software
22	Gymnasium	2 with equipments
23	Sports facilities	Table tennis, Volley ball court, play ground
24	E resource centre	10 computers DELNET, INFLIBNET subscription

Academic Information

UG/PG/PhD programs offered in academic year 2017-2018

Sr. No.	Title of program	Level	Grant	Duration (years)	Year of starting	Sanctioned annual intake	Total student strength
1	B.Sc. (Physics, chemistry, mathematics)	Under graduate	Grant in aid	3 years	1987	180	156
2	B.Sc. (Physics, chemistry, Computer Science)	Under graduate	Non grant basis	3 years	2012	180	151
3	B.Sc. (Chemistry Botany Zoology)	Under graduate	Grant in aid	3 years	1987	360	259
4	M.Sc. Botany	Post-graduate	Non grant basis	2 years	2012	44	38
5	M.Sc. Chemistry	Post-graduate	Non grant basis	2 years	2012	44	38
6	M.Sc. Zoology	Post-graduate	Non grant basis	2 years	2012	44	32

Faculty status (regular/on contract faculties as on March 31st 2018)

Faculty Rank	No. of Sanctioned/regular	Present status: number in position by highest qualification		Number of regular faculty in position	Total Vacancies	Number of Contract faculty in position
		Doctoral Degree	Master's Degree			
Professor	0	0	0	0	0	0
Associate Professor	0	0	0	0	0	0
Assistant Professor	14	8	1	9	5	38

Accreditation status of UG programs

Title of UG program being offered	Whether eligible for accreditation	Whether accredited
B.Sc.	-	Grade B in 2009 Grade B in 2014
M.Sc.	-	Grade B in 2014

Baseline data of Institute

Sr. No.	Parameter	Details
1	Total strength of students in all programs and all years of the study in the year 2016-2017	661
2	Total women students in all programs and all years of the study in the year 2016-2017	438
3	Total SC students in all programs and all years of the study in the year 2016-2017	120
4	Total ST students in all programs and all years of the study in the year 2016-2017	88
5	Total OBC students in all programs and all years of the study in the year 2016-2017	313
6	Number of fully functional and above level computers available in for the students in the year 2016-2017	80
7	Total number of books and reference books available in library for UG and PG	22192
8	Student teacher ratio (Considering contract hour basis faculty)	1:15
9	Percentage of UG students placed through campus interview in the year 2016-2017	0.1
10	Percentage of UG students placed through campus interview in the year 2016-2017	0.1
11	Percentage of high quality graduates passed out the year 2016-2017	15.1
12	Percentage of high quality graduates passed out the year 2016-2017	12
13	Number of research publication in Indian refereed journal 2016-2017	6
14	Number of research publication in International refereed journal 2016-2017	4
15	Number of patents obtained in 2016-2017	1
16	Number of patents filed in 2016-2017	0
17	Number of sponsored projects completed in 2016-2017	0
18	The transition rate of students in percentage from 1 st year to 2 nd year 2016-2017 for all students	71
19	IRG from students fee and other charges in year 2016-2017 (in Lakh) Student fees Grants received from state government	3.1 20.1
20	IRG from externally funded R&D projects in year 2016-2017 (in Lakh)	4.2
21	Total RG in the year 2016-2017 (in Lakh)	27.4
22	Total annual recurring expenditure in 2016-2017 (in Lakh)	28.5

Name of Head of Institute and Project Nodal Officers

Head and Nodal Officer	Name	Mobile	Email
Principal	Dr. G. L. Waghmare	9970031328	glwaghmare@rediffmail.com
RUSA Institutional Co-ordinator	Dr. Mandar Paingankar	9403287660	mandarpaingankar@gmail.com
Nodal Officer for Academic activities	Dr. Syed Abrar Ahmed	9028063693	sdabrar@yahoo.com
Nodal Officer Financial aspects	Mohan Lokhande	9158100446	prigascgadchiroli@gmail.com

Land and proposed construction details

Land Details

Land availability: Yes 3.44 hectares

Owner of land: Government of Maharashtra

Location of land: Chamorshi Road, Gadchiroli, Maharashtra, India.

Latitude: 20.170790 N Longitude: 80.004327 E

Details of building to be constructed

Sr. No.	Description of building	Location	proposed area sq. meters	Total cost per meter	Purpose	Justification
1	Biotechnology Block (2 laboratories 500 sq. meters each, 6 class rooms, 1 seminar room, toilet blocks, faculty rooms, Miscellaneous 100 sq. meter = total 1800 sq.meters,	Government Science College Campus	1800	31662/sq . meter Total cost Rs. 5,69,19,600	Laboratories, faculty rooms, class rooms and seminar room for Industrial Micro biology and agricultural Biotechnology courses	Laboratories and classrooms are essential for conducting theory and practical courses

Details of Equipment required in proposed college

Sr. No.	Name of the Equipment	Quantity	Cost per unit	Total cost	Justification
1	Microscope compound	20	10000	200000	In recent years, syllabus of Science faculty has been changed significantly due to new inventions and advancement in biological sciences. Therefore instruments are required to conduct the practical courses.
2	Microscope dissecting	10	10000	100000	
3	Agarose Gel Electrophoresis units with power supply	4	60000	240000	
4	SDS PAGE Electrophoresis units with power supply	4	90000	360000	
5	2D gel electrophoresis units with gel documentation system	1	1200000	1200000	
6	UV trans illuminator with gel documentation system	1	300000	300000	
7	Laminar flow cabinet	4	200000	800000	
8	-20°C deep freezer	2	150000	300000	
9	-80°C deep freezer	1	800000	800000	
10	Fluorescence microscope with camera	1	1200000	1200000	
11	Dissecting microscope with camera system	1	200000	200000	
12	Cooling centrifuge	2	600000	1200000	
13	Thermal cycler PCR machine	1	400000	400000	
14	BOD incubator 5°-60°C	4	100000	400000	
15	CO2 incubator	1	600000	600000	
16	Tissue culture racks	2	100000	200000	
17	Refrigerator	4	40000	160000	
18	Microwave oven	2	20000	40000	
19	Hot air Oven	2	90000	180000	
20	Computers	10	50000	500000	
21	Autoclave	2	20000	40000	
22	Magnetic stirrer with hot plate	4	6000	24000	
23	Vortex	4	4000	16000	
24	UV-VIS spectrophotometer	1	600000	600000	
25	Flame photometer	1	600000	600000	
26	Micropipettes	10	25000	250000	
27	Plant growth chamber (Biochamber)	01	3500000	3500000	
28	Fermenter	02	500000	1000000	
29	HPTLC	01	1700000	1700000	
30	HPLC	01	1500000	1500000	
	Total	104		22210000	

Academic divisions and programs of proposed model Degree College

UG/PG/PhD programs offered

Sr. No.	Course	Duration	Annual intake	Whether Approved by UGC
1	B.Sc. I,II,II (Physics, chemistry, mathematics)	Three years	180	Yes
2	B.Sc. I,II,II (Physics, chemistry, Computer Science)	Three years	180	Yes
3	B.Sc. I,II,II (Chemistry Botany Zoology)	Three years	360	Yes
4	Physics M.Sc. I,II	Two years	44	Yes
5	Chemistry M.Sc. I,II	Two years	44	Yes
6	Mathematics M.Sc. I,II	Two years	44	Yes
7	Zoology M.Sc. I,II	Two years	44	Yes
8	Botany M.Sc. I,II	Two years	44	Yes
9	Industrial Microbiology M.Sc. I,II	Two years	44	Yes
10	Agricultural Biotechnology M.Sc. I,II	Two years	44	Yes
11	Ph. D. courses in 7 departments			

Details of teaching and non-teaching staff of existing and proposed model college

Sr. No.	Particular	Annexure
1	UG Workload existing college	Annexure I
2	PG Workload existing college	Annexure II
3	Workload and staffing pattern teaching posts for the Proposed Model Degree College	Annexure III
4	Workload and staffing pattern non-teaching post for the Proposed Model Degree College	Annexure IV
5	Work Load (Existing and Proposed) As per staffing pattern for the Proposed Model Degree College	Annexure V
6	GroupWise Distribution of Posts for proposed Model Degree College non-teaching office staff	Annexure VI
7	GroupWise Distribution of Post for proposed Model Degree College Library	Annexure VII
8	Work Load proposed Model Degree College (Existing and Proposed) teaching and non-teaching staff	Annexure VIII
9	Actual Posts Required for Proposed Model Degree College teaching and non-teaching staff	Annexure IX

Annexure I

Under Graduate workload as per Staffing Pattern According to Gondwana University Gadchiroli, Direction 2017, Faculty of Science direction governing the examination leading to the degree of Bachelor of Science –semester pattern with choice based credit system (CBCS) under graduate courses (B. Sc. I, II and III)

Sr. No	Groups	Subject	Sections BSc I/II/III	Student Strength	B.Sc. Workload (Period)				Work load	
					Theory	Practical	Tutorial	Total	In Period	In Hrs
1	2	3	4	5	6	7	8	9	10	11
1	PCM/PMCom	Physics	3	360	18	144	32	196	196	156.8
2	PCM/ CBZ	Chemistry	6	540	24	204	0	228	228	182.4
3	PCM/PMCom	Mathematics	3	360	24	0	48	72	72	60
4	PMCom	Computer Science	3	180	18	72	0	124	124	99.2
5	CBZ	Zoology	3	360	18	144	0	156	156	124.8
6	CBZ	Botany	3	360	18	144	0	156	156	124.8

PCM= Physics Chemistry Mathematics

PMCOM= Physics Mathematics Computer Science

CBZ= Chemistry Botany Zoology

Annexure II

Post graduate workload as per Staffing Pattern As per 30.06.2010 and 15.2.2011 Pyramidal Structure of Teaching staff 1:2:4 and Gondwana University Gadchiroli, faculty of science direction 2017 (Master of Science) -semester pattern with choice based credit system (CBCS) post graduate courses (M. Sc. I and II)

Sr. No	Subject	Academic Years	Student Strength	Batches	M.Sc. I Workload (Hrs)				M.Sc. II Workload (Hrs)				Total (In Hrs)			
					Theory	Pract.	Tuto.	Total	Theory	Pract.	Tuto.	Total	Theory	Pract.	Tuto.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Physics	2	44	4	16	32	-	48	16	32	-	48	32	64	0	96
2	Chemistry	2	44	4	16	36	-	52	16	36	-	52	32	72	0	104
3	Mathematics	2	44	4	25	0	5	25	25	0	5	25	60	0	0	60
4	Zoology	2	44	4	16	32	-	48	16	32	-	48	32	64	0	96
5	Botany	2	44	4	16	32	-	48	16	32	-	48	32	64	0	96
6	Industrial Microbiology	2	44	4	16	32	-	48	16	32	-	48	32	64	0	96
7	Agricultural Biotechnology	2	44	4	16	32	-	48	16	32	-	48	32	64	0	96

Annexure III

Workload and staffing pattern for the teaching posts in Proposed Model Degree, Gadchiroli
Gondwana University Gadchiroli, faculty of science direction 2017 and direction no. 106 of 2012 and direction no. 112 of 2012

Sr. No.	Subject	Workload	Workload	Total Workload	Pyramidal Structure of Teaching staff		
		UG	PG	UG+PG	Professor	Associate Professor	Assistant Professor
		(Hrs)	(Hrs)	(Hrs)	12 Hrs each	14 Hrs each	16 Hrs each
1	2	3	4	5	6	7	8
1	Physics	156.8	96	252.8	1	2	13
2	Chemistry	182.4	104	286.4	1	2	15
3	Mathematics	60	60	88.4	1	2	3
4	Zoology	124.8	96	220.8	1	2	11
5	Botany	124.8	96	220.8	1	2	11
6	Industrial Microbiology	0	96	96	1	2	4
7	Agricultural Biotechnology	0	96	96	1	2	4

Annexure IV

Workload and staffing pattern for the non-teaching posts in Proposed Model Degree, Gadchiroli
Gondwana University Gadchiroli, faculty of science direction 2017 and direction no. 106 of 2012 and direction no. 112 of 2012

Sr. No	Subject	UG			Laboratory Assistant (LAS) Laboratory Attendant (LA) Required (UG)		PG			Laboratory Assistant (LAS) Laboratory Attendant (LA) Required (PG)		Total	
		BSc. Section B.Sc. I/II/III	Student Strength	Batches	LAS	LA	M. Sc. Section MSc. I/II	Student Strength	Batches	LAS	LA	UG + PG Required	
												LAS	LA
1	2	3	4	5	6	7	8	9	10	11	11	12	13
1	Physics	3	360	23	4	16	2	44	4	4	16	8	32
2	Chemistry	6	540	34			2	44	4				
3	Mathematics	3	360	24			2	44	4				
4	Computer Science	3	180	11			2	44	4				
6	Zoology	3	360	23			2	44	4				
7	Botany	3	360	23			2	44	4				
8	Industrial Microbiology	-	-	-			2	44	4				
9	Agricultural Biotechnology	-	-	-			2	44	4				

Annexure V

Work Load (Existing and Proposed) As per Staffing pattern for the Proposed Model Degree College, Gadchiroli

Sr. No.	Subject	Student Strength		Work Load for Existing College						Work Load for Proposed Model Degree College						Non Teaching	
				UG	PG	Sanction Posts		Posts required for UG		UG	PG	Teaching Posts					
		UG	PG	Hrs	Hrs	Teaching	Non Teaching	as per student count 2017		UG	PG	Hrs	Hrs	Professor	Associate Professor		Assistant Professor
		UG	PG	Hrs	Hrs	Teaching	Non Teaching	Teaching	Non Teaching	UG	PG	Hrs	Hrs	Professor	Associate Professor		Assistant Professor
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Principal	720	132	-	-	1	H.C. =01 Sr.C. =01 La.As =01 Jr.C. =01 Lib.C= 01 L.A. =04 Lib.A. =01 Peon = 2	1	H.C. =01 Sr.C. =02 La.As. =03 Jr.C. =02 Lib.C. =01 L.A. =12 Lib.A. =02 Peon = 4	720	352			1	0	0	Sup. =01 H.C =01 A.Lib =01 Sr.C =02 La.As=08 Jr.C =03 Lib.C =01 LA. = 32 Lib.A =03 Peon = 4
2	Director Physical Education	720	132	-	-	1		1		720	352			0	0	1	
3	Librarian	720	132	-	-	1		1		720	352			0	0	1	
4	Physics	360	0	156.8	0	2		5		360	44	156.8	96	1	2	13	
5	Chemistry	540	44	182.4	104	3		9		540	44	182.4	104	1	2	15	
6	Mathematics	360	0	38.4	0	2		3		360	44	60	60	1	2	4	
7	Computer Science	180	0	99.2	0	0		4		180	44	99.2	0	0	0	5	
9	Zoology	360	44	124.8	96	2		5		360	44	124.8	96	1	2	11	
10	Botany	360	44	124.8	96	2		5		360	44	124.8	96	1	2	11	
11	Industrial Microbiology	0	0	0	0	0		0		0	44		96	1	2	4	
12	Agricultural Biotechnology	0	0	0	0	0		0		0	44		96	1	2	4	
13	English	240	0	16	0	0		1		240	0	16	0	0	0	1	
14	Hindi/Marathi	240	0	16	0	0		1		240	0	16	0	0	0	1	
	Total	720	132			14		12		36	27	720	352			8	

Sup. = Superintendent; H.C. = Head Clerk; A. Lib. Assistant Librarian; Sr. C. = Senior Clerk; La. As. = Laboratory assistant; Jr. C. = Junior Clerk; Lib. C. = Library Clerk; L.A. = Laboratory attendant; Lib. A. = Library attendant

Annexure VI

GroupWise Distribution of Posts for College Non-Teaching Staff Office Staff
According to Govt. Resolution No;NGC-2299/(4795)/Vishi - 4 Date 26 August 1999

Sr. No.	Name of the Post	UG + PG			
		Total No. of Students	Group	No. of Posts	Total No. Post
1	2	3	4	5	6
1	Superintendent	1072	C	1	1
2	Head Clerk		C	1	1
3	Senior Clerk		C	2	2
4	Junior Clerk		C	3	3
5	Peon		D	4	4
Total		1072		11	11

Annexure VII

GroupWise Distribution of Post for College Library
According to Govt. Resolution No;NGC-2299/(4795)/Vishi - 4 Date 26 August 1999

Library Staff

Sr. No	Name of the Post	Total No. of students	Group	No. of Posts	Total No. Posts
1	2	3	4	5	6
1	Librarian	1072	A	1	1
2	Assistant Librarian		C	1	1
3	Library Attendant		C	3	3
4	Library Junior Clerk		C	1	1
Total		1072		6	6

Annexure VIII

Work Load (Existing and Proposed)
As per staffing pattern for the Proposed Model Degree College, Gadchiroli

Sr. No	Subject	Work Load for Existing College				Work Load for Proposed Model Degree College						
		Sanction Posts		Posts required		Teaching Posts			Non Teaching			
		Teaching	Non Teaching	As per student count 2017 (UG)		Professor	Associate Professor	Assistant Professor	Posts	No of Post	Contract Basis as per 3.12.2008	No of Post
1	2	3	4	5	6							
1	Principal	1	H.C. 01 Sr.C. 01 La.As 01 L.A. 04 Jr.C. 01 Lib.C. 01 Lib.A. 01 Peon 02	1	H.C. =01 Sr.C. =02 La.As. =03 Jr.C. =02 Lib.C. =01 L.A. =12 Lib.A. =02 Peon = 4	1	0	0	Superintendent	1		
2	Director Physical Education	1		1		0	0	1	Hostel Superintendent	2	Class IV Hostel Boys and girls	2
3	Librarian	1		1		0	0	1	Assistant Librarian	1	Cleanliness Worker	6
4	Physics	2		5		1	2	13	Head Clerk	1	Watchman 24 Hrs	2
5	Chemistry	3		9		1	2	15	Senior Clerk	2	other building servants	3
6	Mathematics	2		3		1	2	4	Laboratory Assistant	9		
7	Computer Science	0		4		0	0	4	Junior Clerk	3		
9	Zoology	2		5		1	2	11	Library Clerk	1		
10	Botany	2		5		1	2	11	Library Attendant	3		
11	Industrial Microbiology	0		0		1	2	6	Laboratory Attendant	32		
12	Agricultural Biotechnology	0		0		1	2	6	Hostel Servant	2		
13	English	0		1		0	0	1				
	Hindi/ Marathi	0		1		0	0	1				
Total		14	12	36	27	8	14	71		61		13

Annexure IX

Work Load (Existing and Proposed)

As per staffing pattern for the Proposed Model Degree College, Gadchiroli

Sr. No.	Subject	Posts Required for Existing College				Actual Posts Required for Proposed Model Degree College						
		Sanction Posts		Posts required		Teaching Posts			Non Teaching			
		Teaching	Non Teaching	As per student count 2017 (UG)		Professor	Associate Professor	Assistant Professor	Posts	No of Post	Contract Basis as per 3.12.2008	No of Post
Teaching	Non-Teaching											
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Principal	1	H.C. 01 Sr.C. 01 La.As 01 L.A. 04 Jr.C. 01 Lib.C. 01 Lib.A. 01 Peon 02	1	H.C. =01 Sr.C. =02 La.As. =03 Jr.C. =02 Lib.C. =01 L.A. =12 Lib.A. =02 Peon = 4	0	0	0	Superintendent	1		
2	Director Physical Education	1		1		0	0	0	Hostel Superintendent	2	Class IV Hostel Boys and girls	2
3	Librarian	1		1		0	0	0	Assistant Librarian	1	Cleanliness Worker	6
4	Physics	2		5		1	2	11	Head Clerk	0	Watchman 24 Hrs	2
5	Chemistry	3		9		1	2	12	Senior Clerk	1	other building servants	3
6	Mathematics	2		3		1	2	2	Laboratory Assistant	7		
7	Computer Science	0		4		0	0	4	Junior Clerk	2		
8	Zoology	2		5		1	2	9	Library Clerk	1		
9	Botany	2		5		1	2	9	Library Attendant	2		
10	Industrial Microbiology	0		0		1	2	4	Laboratory Attendant	28		
11	Agricultural Biotechnology	0		0		1	2	4	Hostel Servant	2		
12	English	0		1		0	0	1				
13	Hindi/Marathi	0		1		0	0	1				
Total		14	12	36	27	7	14	57		47		13

In Institutional development Plan submitted to RUSA, following infrastructure up-gradation were proposed (IDP submitted in January 2018)

Language laboratory: The feature of language laboratory provides equal opportunity as well as the privacy to the students that encourage the shy students to speak without any hesitation. Language laboratory will aid the modern language teaching of students of tribal areas such as Gadchiroli. Additionally it will help in improving the communication skills of the students. Therefore language laboratory is necessary in area like Gadchiroli where most of the students are from tribal area.

Competitive Examination Section: Students from Gadchiroli are more familiar with the problems of tribal area as compared to other students in state. The representation of students from these areas in the Government jobs will be beneficial in designing the strategies to improve the quality of living of tribal communities. Additionally representation of these students in policy making boards will be helpful in solving the fundamental problems of the tribal area. Establishment of the competitive examination section will help these students in preparation of competitive examination.

Smart Classrooms: Smart classrooms foster the opportunities for teaching and learning and also help in teaching the concepts very effectively. Internet connection and smart classroom is essential to teach the new advanced courses effectively.

Upgradation of library and laboratory resources: To provide the platform for research scholars and post graduate students of Gadchiroli area upgradation of infrastructure of laboratories and library is essential. The Government Science College Gadchiroli has limited facilities to carry out the advanced research. Therefore there is urgent need to procure the instruments and facilities that will boost the research activities. We are planning to convert our existing library in to state of art library by purchasing the basic books in various subjects written by renowned authors and researchers and subscribing the e resources, National and International Journals. Similarly digitalization of library will be completed by procuring additional resources. Procurement of research related equipment for various departments will enhance the infrastructure that is essential to carry out the good quality research. Government Science College will share the instrument facility with community of scholars of Gadchiroli area that will provide good platform to up-and-coming researchers of Gadchiroli. E-resource Centre will help in literature survey, experiment design and other activities involved in research. Quality research with aid of

good quality literature will help in developing the scientific temperament in students and research scholars of Gadchiroli.

Computational analysis software facility: Research in any subject requires the support of computational analysis. For chemistry, Physics and Biology few software such as Sigma Plot, Matlab, Statistica, Schrodinger is essential to carry out the computation work. Computer work station with software is essential for computational analysis. This computational analysis facility will help in improving the quality of research.

Botanical garden and herbarium repository: The tribal medicines are very effective against the various diseases. Medicinal plants from various parts of Gadchiroli will be collected and reared in botanical garden. Additionally plant herbarium repository of Gadchiroli district will be established and digitalization of herbarium repository will be carried out. It will help in conserving the tribal medicinal knowledge and will be helpful in future floral studies of Gadchiroli district.

Creating the environment conducive to learning:

To create a college environment conducive to learning, one must first focus on the creating an atmosphere that encourages participation students in various sports, academic and cultural activities. For creating conducive environment in college, student facilitation hub, gymnasium, sports equipments, facilities in hostel and physical education department are essential.

Student facilitation hub: The room equipped with computers and internet connection will be created for students to facilitate university examination, scholarship and entrance examination online form submission.

CCTV camera in boys and girls hostel: CCTV camera is essential for newly built Boys and Girls hostel. It will enhance the security as well as vigilance in hostels.

Administrative block infrastructure improvement: Bulk SMS system is essential to convey the message to students, parents, teaching, non-teaching staff and alumni. Interactive Notice boards are essential to display various notice related to admission, scholarships, examination forms. Computers are required in administrative section to fill up the online forms of admission, examination, scholarships etc. Similarly all administrative work such as GEM, Sevarth etc. are now online. Therefore administrative block requires the computers with scanner, printers to carry out the various administrative works.

Course structure of post graduate course in Industrial Microbiology and Agricultural Biotechnology

Course	Year and Semester	Subjects
Industrial Microbiology	M.Sc. I Semester I	Introduction to Cell Biology and Genetics, Fundamentals of Biochemistry and Molecular Biology, Microbiology and Microbial Genetics, Biostatistics and Bio-techniques, Practical I, Practical II, Seminar
	M.Sc. I Semester II	Microbial diversity and Environmental Microbiology, Enzymes production and Fermentation technology, Recombinant DNA technology and Genetic Engineering, Immunology, Practical III, Practical IV, Seminar
	M.Sc. II Semester III	Genomics and proteomics, Microbial biotransformation- Metabolic pathway engineering, Industrial and food Biotechnology, IPR, Biosafety and Bioethics, Practical V, Practical VI, Seminar
	M.Sc. II Semester IV	Nano-biotechnology, Bioinformatics, Biotransformation, Agricultural Microbiology-Bio-pesticides and Bio-fertilizers, Practical VII, Practical VIII-project, Seminar
Agricultural Biotechnology	M.Sc. I Semester I	Introduction to Cell Biology and Genetics, Fundamentals of Biochemistry and Molecular Biology, Plant Developmental Biology, Biostatistics and Bio-techniques, Practical I, Practical II, Seminar
	M.Sc. I Semester II	Applied Botany-medicinal plants and secondary metabolites of plants, Molecular Plant breeding, Recombinant DNA technology and Genetic Engineering, Plant diseases and Immunology, Practical III, Practical IV, Seminar
	M.Sc. II Semester III	Plant tissue Culture, Food Biotechnology, Biotic and Abiotic stress Biology, Genomics and proteomics, Practical V, Practical VI, Seminar
	M.Sc. II Semester IV	Bioinformatics, Plant genetics Engineering, Metabolic engineering and molecular farming, Agricultural Microbiology-Bio-pesticides and Bio-fertilizers, Practical VII, Practical VIII-project, Seminar

Date :

Place: Gadchiroli

Dr. G. L. Waghmare
Principal

Government Science College Gadchiroli

Dr. Mandar Paingankar
RUSA- Coordinator

Government Science College Gadchiroli