Department of Physics

1. **Name of the Department:** PHYSICS
2. **Year of establishment:** JUNE 1962
3. **Names of programmes offered (UG, PG, M. Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc. D.Utt. etc.):** UG
4. **Interdisciplinary programmes and departments involved:** NIL
5. **Examination System: Annual/Semester (Trimester Choice Based Credit) System:** Semester
6. **Participation of The department in the courses offered by other department:** NIL
7. **Courses in collaboration with other universities industries foreign industries: -** None
8. **Details of the courses/ programee discontinued (if any):-** None
9. **Number of teaching posts sanctioned, filled and actual:**

	Sanctioned	Filled
Associate Professor	02	00
Assistant Professor	03	03

10. **Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance.**

Teaching Name of Faculty	***Qualification***	***Designation Status***	***Permanent /CHB***	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
M.G.Patil	***M.sc M phil. Ph.D***	***Associate Professor***	***Permanent Retired-2016***	***Materials Science***	***35***	***03***
S.R.Kokre	***M.sc Ph.D***	***Associate Professor***	***Permanent Trasferred-2014***	***Applied Electronic***	***21***	***-***
P.KMaskar	***M.sc M. Phil Ph.d***	***Associate Professor***	***Permanent Retired-2016***	***Materials Science***	***34***	***-***
V.S. Dhoble	***M.sc B.Ed NET***	***Assistant Professor***	***Permanent***	***Astrophysics & Electronics***	***2***	***_***
V.V Ganbavle	***M.sc Ph. D***	***Assistant Professor***	***Permanent***	***Theoretical Physics***	***-***	***_***

S.I.Inamdar	***M.sc Ph. D***	***Assistant Professor***	***Permanent***	***Solid State Physics***	***-***	***_***
S.K.Khot	***M.sc B .Ed***	***Assistant Professor***	***CHB***	***energy studies***	***10***	***_***
S.B.Koli	***M.sc B.Ed***	***Assistant Professor***	***CHB***	***spectroscopy Physics***	***10***	***_***
P.B. Bagwade	***M.sc***	***Assistant Professor***	***CHB***	***Space sciences***	***2***	***_***
S. A.Kardile	***M.sc B. Ed***	***Assistant Professor***	***CHB***	***Astrophysics& Electronics***	***1***	***_***
A. R. Nimbalkar	***M.sc***	***Assistant Professor***	***CHB***	***Materials science***	***1***	***_***
V.S. Pawar	***M.sc***	***Assistant Professor***	***CHB***	***Solid State Physics***	***_***	***_***

11. **List of senior visiting faculty:-** NIL

12. **Percentage of lectures delivered and practical classes handled by temporary faculty:-** (Grantable- 30%, Non-Grantable-100%)

13. **Programme-wise Student Teacher Ratio (2015-16)**:---

Sr. No	Class	No. of Students	No. of Faculty	Ratio
1	B.sc I	390	4	97.5:1
2	B.sc II	160	4	40:1
3	B.sc III	35	5	7:1

14. **Number of academic support staff (technical) and administrative staff sanctioned filled and actua**

Posts	Sanctioned	Filled
Lab Assistant	*1*	*1*
Lab Attendant	*4*	*3*

15. **Qualifications of teaching Faculty with Ph.D./ M.Phil./PG:**

Faculty with Ph. D, -05, Facultywith M.Phil.-01, Faculty with P.G. – 08

16. **Number of faculty with ongoing projects from:**

(i) National: Nil

(ii) International funding agencies ------

(iii) Total grants received: Nil

17. **Departmental projects funded by DST-FIST; UGC-SAP/CAS, OPE; DBT, ICSSR, AICTE, etc. total grants received:-**

Sr. No.	Principal Investigator	Title of the project	Year	Funding Agency	Amount received (Rs.)
1	M. G. Patil	structural, electrical &Magnetic properties tetravalent ion substituted Cd-Ni ferrite	2011	UGC-SAP/CAS	142500/-

18. Research centre/ faculty recognized by the university:- Nil

19. Publications: ---

• Number of papers published in peer review journal (national/international):

Sr. No	Faculty Name	No of paper published
1	Dr. Patil M.G.	03
2	Dr. Maskar P.K.	03
3	Dr. Ganbavale V.V.	06
4	Dr. Inamdar S.I.	05

• Books with ISBN with details of publishers: 14

Sr. No.	Title	Author	Publisher	ISBN.no.
1	Text book of Mechanics and properties of matter, SEM-I, Paper I	M. G. Patil	Nirali prakashan	978-93-5164-135-7
2	Text book of Osillations, waves and optics, SEM I, Paper II	M. G. Patil	Nirali prakashan	978-93-83971-46-9
3	Text book of Kinetic theory of gases, SEM II, Paper III	M. G. Patil	Nirali prakashan	978-93-83971-46-6
4	Text book of electricity, magnetism and basic electronics, SEM II, Paper IV	M. G. Patil	Nirali prakashan	978-93-83750-69-6
5	Text book of General Physics, Sound and Acoustics, SEM III, Paper V	M. G. Patil	Nirali prakashan	978-93-83971-01-5
6	Text book of Electronics and semiconductor devices, SEM IV, Paper VI	M. G. Patil	Nirali prakashan	978-93-5164-152-0
7	Text book of Optics and Lasers, SEM IV, Paper VII	M. G. Patil	Nirali prakashan	978-93-5164-153-7
8	Text book of Reletivity and modern physics, SEM IV, Paper VIII	M. G. Patil	Nirali prakashan	978-93-5164-780-7
9	Text book of Mathematical and statistical physics	M. G. Patil	Nirali prakashan	978-93-5164-745-4
10	Text book of Quantum Mechanics	M. G. Patil	Nirali prakashan	978-93-5164-746-1
11	Text book of Classical Mechanics	M. G. Patil	Nirali prakashan	978-93-5164-747-8
12	Text book of Atomic and molecular spectra, astronomy and astrophysics	M. G. Patil	Nirali prakashan	978-93-5164-748-5
13	Text book of Nuclear and partical physics	M. G. Patil	Nirali prakashan	978-93-5164-869-7

14	ZnO based ultraviolet photodetector	Sumayya I. Inamdar, Vinayak V. Ganbawle, Kesu. Y. Rajpure	Lambert academic publishing. Germany.	978-3-659-94168-9

• Number listed in International Database (For e.g. Web of Science, Scopus,

Humanities International Complete, Dare Database - International Social Sciences, Directory, EBSCO host, etc.)

• Citation Index - range / average**:** 232 (Google scholar)

• SNIP: 1.843

• SJR: 0.544-1.743

• Impact Factor - range / average: 1.094-5.310

• H-index: 4 (Google scholar)

20. Areas of consultancy and income generated- No

21. Faculty serving in:

(a) National committees— Nil

(b) International committees- Nil

(c) Editorial Boards – Nil

22. Student projects

a) Percentage of students who have done in-house projects including interdepartmental projects— Yes B.Sc.III 100% , (All Students)

b) Percentage of students doing projectin incollbioration with orhter industry/ institute: - Nil

23. Awards /recognitions received at the national and international level by

• **Faculty:** 1) M. G. Patil Awarded ‘Adrash shikshak puraskar’.

• Doctoral /post doctoral fellows:

1) Dr. Patil M.G. Recognized as Ph.D &M.Phil. Guide.

2) P.K.Maskar Recognized as Ph.D &M.Phil. Guide.

3) S.R.Kokre Recognized as Ph.D &M.Phil. Guide.

• Students:

1) Mr. A. R. Nimbalkar - Synthesis and characterization of copper doped zinc oxide films for gas sensing application.

2) Miss. N. B. Patil- Investigation of optoelectronic and gas sensing properties of aluminum doped zinc oxide.

24. List of eminent academicians and scientists/ visitors to the department:

1. Prof. S.H. Pawar, V.C., D.Y. Patil Deemed University, Kolhapur
1. Prof. P. S. Patil, Shivaji University, Kolhapur
2. Dr. V. B. Patil,
4. Prof. C. D. Lokhande, Shivaji University, Kolhapur

25. Seminars/Conferences/Workshops organized and the source of funding (national\international) with details of outstanding participants, if any:

UCG sponsored two day national conference organized on "Nano-material and nano-material based devices" on 23rd and 24th 2014.

26. Student profile programme course-wise:

Name of the course & Year	Application Received	No of students Enrolled			Pass Percentage %
		Sancationed	Female	Male	
B.Sc III 2015-16	40	35	16	19	74.35

27. Diversity of Students -2015-16

Name of the Course	% of Students from Same State	% of Students from other State	%of Students from Abroad
B. Sc.	100	___	___

28. How many students have cleared national and state competitive and Defence Services examinations, such as NET, SET, GATE civil services defense services etc.:- Nil

29. Student progression-2015-16

Student Progression	Percentage against enrolled
UG to PG	19%

30. Infrastructural Facilities

(i) Library: Separate library is maintained in the departmentwith 41 Books.

(ii) Internet facilities for staff and students: in department, central library.

(iii) Class rooms with ICT facility: 1, common ICT – auditorium and IT laboratory

(iv) Students' laboratories: 1) Two separate laboratories

2) One dark room

3) One semi dark room

(v) Research laboratories: -------

31. Number of students receiving financial assistance from college, university, government or other agencies:

Students from socially and economically under privileged groups are getting scholarship/freeship from state Government.

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts:-

Seminars, guest lectures, Quiz competition, Poster presentation/wall paper presentation

33. Teaching methods adopted to improve student learning

Lecturing, LCD, questionnaire, charts, and google class room, demos, unit test pre-semester, Surprise test, group discussion.You tube lectures.

34. Participation in institutional social responsibility (ISR) and extension activities:

- From B.Sc.III Vinayak S. Pawar awardee of scholarship for bright students by "Gitanjali Foundation"
- From B.Sc. III Desai Aditya joined 5th Bhartiya Chatra sansad organized by MAERRS MIT School of Government Pune on 10th to 12th Jan 2015 ,NSS activities,
- Genius 2K14 Quiz organized on 11/12/2014 ,

35. SWOC analysis and future plans of the department

Strengths:-

1. Well qualified faculty.

2 Strong research activities.

3 Faculty is involved in collaborative research with IIT Bombay.

3 Best co - and extra-curricular activities

4 Organized National conferance on Nanoscience.

Weaknesses: -

1 Lack of PG programme

2 Lack of certificate course

Opportunities:-

1. To enrich the dept laboratory with additional equipments.
2. To start PG programme.

Challenges:-

1. To encourage students to contribute fundamental & applied knowledge
2 To enhance collaborative research

Future plans of the department.

1. To start certificate course in mantainance of electrical appliances. Organization of National Conference.

2. To introduce PG programme.

3. To enrich departmental library.