Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Programme Outcomes - Bachelor of Arts – B. A.

P. O. No.	Programme Outcome	Skill
1	Identify the basic disciplinary knowledge of conventional disciplines and its applications, in the modern world to solve non familiar problems and apply learning to real life situations	**Problem Solving**
2	Enhance communication. Skills such as reading, listening, writing, speaking for expressing themselves effectively in real and virtual world with capability to use ICT	**Communication skills**
3	Analyse with critical thinking and using higher order cognitive abilities for solving problems, related with their social environments and implementing feasible solutions	**Ethical thinking**
4	Appreciate and understand the importance of Scientific solutions in social, political economic contexts and understand the need for sustainable development	**Scientific Reasoning**
5	Understand and apply the need of research, in the respective disciplines / subjects and developing awareness about research related aspects such as data collection and analysis inquire and question, plan and implement the results of research in the field or otherwise under the guidance of research supervisor	**Research related skills**
6	Acquire the importance of mental, moral, intellectual, social, aesthetic development of an individual for a healthy society and equity centred national development	**Moral and Ethical awareness**
7	Acquire knowledge about diversified cultures and engage with multicultural diverse groups	**Multicultural Competence**

Dr. kiran Pingale

Dr. Motiram Deshmukh

Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Harsul, Tal.Tryambakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

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Department of Marathi

Programme Outcomes - Master of Arts – M. A.

P. O. No.	Programme Outcome	Skill
1	Acquire the ability to think critically making them sensitive and sensible enough to solve issues related with mankind	**Critical thinking**
2	Acquire knowledge about research methods, involving development of research framework, collecting data. Quantitative and qualitative analysis and presenting research findings rationally.	**Research related skills**
3	Augment effective communication skills for applying the same in their careers	**Communication Skills**
4	Facilitate ability for innovative thinking and bridging the gap between theory and practice	**Research Competence**
5	Develop rational thinking to conduct professional analysis of social processes	**Environment and Sustainability**
6	Demonstrate and channelize the interests in a better way to be a lifelong learner with independent thinking in the context of socio-technological changes .	**Self-directed and Lifelong learner**
7	Collaborate successfully with others individually and in teams	**Personal and professional Competence**

Dr. kiran Pingale

Dr. Motiram Deshmukh

Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Harsul, Tal.Tryambakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir`s

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Department of Marathi

Programme Specific Outcomes - Bachelor of Arts – B. A.

PSO. No.	Programme Specific Outcome
After completing the Bachelor of Arts in Marathi, students are able to	
1	विद्यार्थ्यांना मराठी भाषेचे स्वरूप, प्रकार व ज्ञान यांचे आकलन असेल.
2	विद्यार्थ्यांना समाजाकडे बघण्याचा सकारात्मक दृष्टीकोन निर्माण केला जाईल.
3	विद्यार्थी प्रमाण मराठी भाषा आणि बोली भाषा यांचा सुयोग्य वापर करण्यास सक्षम असतील.
4	विद्यार्थ्यांचे लेखन कौशल्ये विकसित होईल.
5	विद्यार्थ्यांची आकलन क्षमता विकसित होईल.
6	विद्यार्थ्यांना स्पर्धात्मक परीक्षांचे ज्ञान अवगत होईल.

Dr. kiran Pingale

Dr. Motiram Deshmukh

Principal

M. G. Vidyamandir's

Arts, Science & Commerce College

Harsul, Tal.Tryambakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

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Department of Marathi

Programme Specific Outcomes - Master of Arts – M. A.

PSO. No.	Programme Specific Outcome
After completing the Master of Arts in Marathi, students are able to	
1	साहित्याचे विविध प्रवाह यांचे महत्व स्पष्ट होते व विद्यार्थ्यामध्ये साहित्यनिर्मिती प्रक्रिया समजावून घेतो.
2	विद्यार्थ्यामध्ये साहित्य संशोधनवृत्ती व संशोधनाभिरूची वाढीस लागते
3	सामाजिक समस्या समजून घेऊन या समस्यांवर उपाययोजना शोधण्याची क्षमता विकसित होते.
4	सादरीकरण, चर्चासत्र, लघुसंशोधन प्रकल्प व गटचर्चा इत्यादी कौशल्ये आत्मसात करतो. या कौशल्यांचा व्यावसायिक क्षेत्रात उपयोग होतो.
5	प्रसार माध्यमांचे समाजातील महत्व विशद करतो.
6	लेखन गुणांना उत्तेजन मिळते. चिकित्सक अभ्यासाची क्षमता विकसित होते. वाङ्मयीन प्रश्न व चालवली यांविषयी विचारप्रवणता वाढते.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Harsul, Tal.Tryambakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - F. Y. B. A.

Class – F. Y. B. A.

Semister – I

Paper	Course title	Outcome
G - 1	F.Y.B.A. [11021A] CC-1A (3) मराठी साहित्य : कथा (समकालीन मराठी कथा) आणि भाषिक कौशल्येविकास	'कथा' या साहित्यप्रकाराचे स्वरूप, घटक आणि प्रकार यांची माहिती सांगता येईल.
		वाङ्मयीन अभिरुचीचा विकास होऊन विविध साहित्यप्रवाहांतील कथांचा आस्वाद घेण्याची डोळस क्षमता वाढीस लागेल.
		मराठी कथा साहित्य आणि संस्कृती यांचा मेळ घालून जीवनमूल्ये आत्मसात होतील.
		भाषिक कौशल्य आत्मसात करता येतील.
		भाषिक कौशल्यविकास साधता येईल.
		साहित्यकृतीतून लेखकाच्या समकालाचे प्रतिबिंब कशा प्रकारे प्रकट होते याची माहिती आत्मसात करता येईल

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Tal. Tryambakeshwar, Dist. Nasik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - S. Y. B. A.

Class – S. Y. B. A.

Semister – III

Paper	Course title	Outcome
G - 2	S.Y.B.A. [23023] CC-1C (3) भाषिक कौशल्येविकास आणि आधुनिक मराठी साहित्यप्रकार : कादंबरी (रारंग ढांग)	'कादंबरी' या साहित्यप्रकाराचे स्वरूप, घटक, वाटचाल आणि प्रकार यांची ओळख होईल.
		वाङ्मयीन अभिरुचीचा विकास होऊन 'कादंबरी' या साहित्यप्रकाराचा आस्वाद घेण्याची डोळस क्षमता वाढीस लागेल.
		संगणक आणि मोबईलवर युनिकोडमधून मराठी मुद्रण करता येईल.
		कळफलकांच्या प्रकारांचा परिचय होईल.
		मराठी टंकलेखन आणि युनिकोडचा वापर करता येईल. (गुगल इनपुट, मायक्रोसॉफ्ट इनपुट इ. साधने)
		रारंगढांग या कादंबरीची भाषाशैली, पात्र, वातावरण इत्यादी घटकांची ओळख होईल.
S - 1	S.Y.B.A. [23021] DSE-1A (3) आधुनिक मराठी साहित्य : प्रकाशवाटा	'आत्मचरित्र' या साहित्यप्रकाराच्या प्रेरणा आणि वाटचाल यांची ओळख होईल.
		इतर साहित्यप्रकारांच्या तुलनेत 'आत्मचरित्र' या साहित्यप्रकाराचे वेगळेपण स्पष्ट करता येईल.
		'आत्मचरित्र' या साहित्यप्रकाराचे आकलन, आस्वाद आणि विश्लेषण करता येईल.
		'आत्मचरित्र' या साहित्यप्रकाराच्या अभ्यासातून जीवनमूल्यांचे आणि नीतितत्त्वांचे ज्ञान मिळून जीवनविषयक समज विकसित होईल.
		प्रकाशवाटा या आत्मचरित्राचे वेगळेपण समजून घेतील.

S - 2	S.Y.B.A. [23022] DSE-2A (3) साहित्यविचार	साहित्याच्या स्वरूपाचे विश्लेषण करता येईल.
		साहित्याची प्रयोजने स्पष्ट करता येतील.
		साहित्याच्या निर्मितीप्रकियेविषयी चर्चा करता येईल.
		साहित्याची भाषा आणि शैली विषयक विचारांचा परिचय होईल.
		साहित्याच्या शब्दार्थांचा वक्रव्यापार, वक्रोक्ती, अलंकार, प्रतिमा, प्रतिक, प्राक्कथा यांचे विश्लेषण करता येईल.
(MIL) Modern Indian Languages	S.Y.B.A. [23011] MIL-2 (2) मराठी भाषिक संज्ञापन कौशल्ये	प्रगत भाषिक कौशल्यांची क्षमता विकसित होईल.
		प्रसारमाध्यमांतील संज्ञापनाचे स्वरूप आणि स्पष्ट करता येईल.
		व्यक्तिमत्व विकासातील भाषेचे स्थान स्पष्ट होईल.
		लोकशाहीतील जीवनव्यवहार आणि प्रसारमाध्यमे यांच्यातील परस्पर संबंधांची ओळख होईल.
		प्रसारमाध्यमांसाठी लेखनक्षमता विकसित होईल.
SEC	S.Y.B.A. [23025] SEC-2A (2) प्रकाशनव्यवहार आणि संज्ञापन	प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त होतील.
		प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण मिळेल.
		प्रकाशनव्यवहार आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त होतील.
		प्रकाशन संस्था, छापखाने, वृत्तपत्र कार्यालये, वितरण संस्था, फ्लेक्स निर्मिती केंद्र, वार्ताहर यांच्या भेटीतून प्रशिक्षण प्राप्त होईल.
		प्रत्यक्ष अनुभवातून प्रकाशनव्यवहार आणि संपादन क्षेत्राचे ज्ञान मिळेल.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
College

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. - Nashik

Department of Marathi

Course Outcomes - S. Y. B. A.

Class - S. Y. B. A.

Semister - I V

Paper	Course title	Outcome
G - 2	S.Y.B.A. [24023] CC-1D (3) भाषिक कौशल्येविकास आणि आधुनिक मराठी साहित्यप्रकार : ललितगद्य (साहित्यरंग)	'ललितगद्य' या साहित्यप्रकाराचे स्वरूप, घटक, वाटचाल आणि प्रकार यांची ओळख होईल.
		साहित्यरंग या अभ्यासपुस्तकातील ललित लेखांचा आकलन व आस्वाद घेतील.
		अध्ययनात 'गुगल फॉर्म' चा वापर करता येईल.
		अध्ययनात 'गुगल क्लासरूम' चा वापर करता येईल.
		अध्ययनात 'यु-ट्यूब' चा वापर करता येईल.
		साहित्यरंग या अभ्यासपुस्तकातील ललितगद्य या साहित्य प्रकारचे आकलन होईल.
S - 1	S.Y.B.A. [24021] DSE-1B (3) ध्ययुगीन मराठी साहित्य : निवडक मध्ययुगीन गद्य, पद्य	'मध्ययुगीन गद्य : महानुभावीय गद्य, बखर, ऐतिहासिक पत्रे' या साहित्यप्रकारांचे स्वरूप आणि विशेषांचा परिचय होईल.
		'मध्ययुगीन पद्य : अभंग, भारुड, गवळण, पोवाडा, लावणी' या साहित्यप्रकारांचे स्वरूप आणि विशेषांचा परिचय होईल.
		मराठी भाषा, मराठी साहित्य आणि मराठी संस्कृती यांचा परिचय होईल
		मराठीतील साहित्यप्रकारांचा परिचय होऊन साहित्यविषयक आकलन, आस्वाद आणि मूल्यमापनक्षमता विकसित होईल.
		साहित्याभ्यासातून जीवनमूल्यांचे आणि नीतितत्त्वांचे ज्ञान मिळून जीवनविषयक समज विकसित होईल.

S - 2	S.Y.B.A. [24022] DSE-2B (3) साहित्य समीक्षा	साहित्य आणि समीक्षा यांचा परस्पर संबंधांचा परिचय होईल. साहित्यप्रकारानुसार समीक्षेचे स्वरूप समजून घेता येईल. ग्रंथ परिचय, परीक्षण व समीक्षण यातील फरक ओळखता येईल. साहित्याच्या समीक्षेविषयीची समज विकसित होईल. समीक्षकाने पाळावयाची पथ्ये समजून घेतील.
(MIL) Modern Indian Languages	S.Y.B.A. [24011] MIL-2 (2) नवमाध्यामे आणि समाजमाध्यामांसाठी मराठी	भाषा, जीवनव्यवहार आणि नवमाध्यमे, समाजमाध्यमांचे परस्पर संबंध यांचा परिचय होईल. नवमाध्यमे आणि समाजमाध्यमांसाठी लेखनक्षमता विकसित होईल. नवमाध्यमे आणि समाजमाध्यमांविषयक साक्षरता निर्माण होईल. नवमाध्यमे आणि समाजमाध्यमांचा वापर आणि परिणाम याबद्दल चर्चा करता येईल. वेबसाईट, ब्लॉग आणि ट्विटर या लेखन क्षमता विकसित होईल.
SEC	S.Y.B.A. [24025] SEC-2B (2) उपयोजित लेखनकौशल्ये	जाहिरात, मुलाखतलेखन आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त होतील. जाहिरात, मुलाखतलेखन आणि संपादन यासाठी प्रशिक्षण मिळेल. जाहिरात, मुलाखतलेखन आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त होतील. विविध माध्यमांसाठी नोंदलेखन करता येईल. प्रत्यक्ष अनुभवातून जाहिरात, मुलाखतलेखन आणि संपादन क्षेत्राचे ज्ञान मिळेल.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Arts, Commerce College
Panchavati, Dist Nashik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. - Nashik

Department of Marathi

Course Outcomes - T. Y. B. A.

Class - T. Y. B. A.

Semister - V

Paper	Course title	Outcome
G - 3	T.Y.B.A. [33023] CC-1E (3) भाषिक कौशल्येविकास आणि आधुनिक मराठी साहित्यप्रकार : प्रवासवर्णन (तीन मुलांचे चार दिवस)	तीन मुलांचे चार दिवस या प्रवासवर्णनाचे आकलन करू शकतील
		प्रवासवर्णन या वाङ्मयप्रकाराची माहिती सागू शकतील.
		प्रवासवर्णनाचे आकलन आस्वाद करू शकतील
		विविध वाङ्मयप्रकारांतील ग्रंथाचे परीक्षण करू शकतील.
		मुद्रित माध्यमांसाठी लेखन कौशल्ये आत्मसात करू शकतील.
		प्रवासवर्णन साहित्य प्रकाराचे वेगळेपण, प्रेरणा, प्रयोजन याचे विश्लेषण करता देईल.
S - 3	T.Y.B.A. [33021] DSE-1C (3+1) मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास - प्रारंभ ते १६००	'मध्ययुगीन गद्य : महानुभावीय गद्य, बखर, ऐतिहासिक पत्रे' या साहित्यप्रकारांचे स्वरूप आणि विशेषांचा परिचय होईल.
		'मध्ययुगीन पद्य : अभंग, भारुड, गवळण, पोवाडा, लावणी' या साहित्यप्रकारांचे स्वरूप आणि विशेषांचा परिचय होईल.
		मराठी भाषा, मराठी साहित्य आणि मराठी संस्कृती यांचा परिचय होईल.
		मराठीतील साहित्यप्रकारांचा परिचय होऊन साहित्यविषयक आकलन, अभिरुची, आस्वाद आणि मूल्यमापनक्षमता विकसित होईल.
		साहित्याभ्यासातून जीवनमूल्यांचे आणि नीतितत्त्वांचे ज्ञान मिळून जीवनविषयक समज विकसित होईल.

S - 4	T.Y.B.A. [33022] DSE-2C (3)-1) वर्णनात्मक भाषाविज्ञान भाग - १	भाषेचे स्वरूप, महत्त्व, प्रमुख अंगे यांचे विश्लेषण करू शकतील.
		भाषा अभ्यासपध्दतीचे विवेचन करू शकतील.
		वागेंद्रियांच्या रचनेसह स्वननिर्मिती प्रक्रिया स्पष्ट करता येईल.
		मराठी भाषेच्या व्युत्पत्तीची मीमांसा करता येईल.
		स्वन विचार ही संकल्पना व अर्थाचे प्रकार त्यांना विशद करता येईल.
SEC	T.Y.B.A. [3011] SEC-2C (2) कार्यक्रम संयोजनातील भाषिक कौशल्ये भाग १	कार्यक्रम संयोजन कौशल्यांचे स्वरूप समजून घेतील.
		कार्यक्रम संयोजनातील भाषिक कौशल्ये आत्मसात करू शकतील.
		विविध कार्यक्रमांचे प्रकार समजून घेऊ शकतील. (भाषणे, चर्चासत्रे, परिषदा, गटचर्चा, बैठक, मेळावे, कला-सांस्कृतिक कार्यक्रम)
		कार्यक्रम संयोजनातील विविध घटकांचे आकलन करू शकतील. (आयोजक, प्रायोजक, जाहिरात, निवेदक)
		कार्यक्रमाची योजना आखणी व रूपरेषा समजून घेतील.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Harsul, Tal-Trymbakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - T. Y. B. A.

Class – T. Y. B. A.

Semister – V I

Paper	Course title	Outcome
G - 3	T.Y.B.A. [34023] CC-1F (3) भाषिक कौशल्येविकास आणि आधुनिक मराठी साहित्यप्रकार : कविता	रूप कवितेचे या कविता संग्रहाचे आकलन करू शकतील
		कविता या वाङ्मयप्रकाराची माहिती सागू शकतील.
		कविता या वाङ्मय प्रकारचे आकलन आस्वाद करू शकतील
		राज्य घटनेतील भाषाविषयक तरतुदी, मराठी राजभाषा अधिनियम, मराठीविषय कार्य करणाऱ्या शासकीय संस्थांचा परिचय होईल.
		कवितेचे स्वरूप, वाटचाल, प्रेरणा आणि वैशिष्ट्ये समजू शकतील.
		अभ्यासक्रमासाठी असलेल्या निवडक कवितांचे रसग्रहण, विश्लेषण करता येईल.
S - 3	T.Y.B.A. [34021] DSE-1D (3+1) मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास - १६०१ ते १८१७	मध्ययुगीन पद्य : पंडिती व शाहिरी काव्य विशेषांचा परिचय होईल.
		मध्ययुगीन गद्य : बखर वाङ्मय या साहित्यप्रकारांचे स्वरूप आणि विशेषांचा परिचय होईल.
		संत तुकाराम व संत रामदास यांच्या पद्य वाङ्मयाचे आकलन आस्वाद करू शकतील
		रामचंद्रपंत अमात्य यांच्या आज्ञापत्राविषयी माहिती सांगू शकतील.
		पंडिती काव्याचे स्वरूप, वाटचाल, प्रेरणा आणि वैशिष्ट्ये समजू शकतील.

S - 4	T.Y.B.A. [34022] DSE-2D (3)-1) वर्णनात्मक भाषाविज्ञान भाग २	रुपिमविचार ही संकल्पना व रुपिमांचे प्रकार त्यांना विशद करता येईल.
		वाक्यविचार ही संकल्पना व वाक्याचे घटक विशद करता येईल.
		अर्थ म्हणजे काय याविषयी माहिती सांगू शकतील.
		अर्थाच्या विविध संकल्पनाची भाषावैज्ञानिक अंगाने परिचय होईल.
		अर्थ ही संकल्पना व अर्थाचे प्रकार त्यांना विशद करता येईल.
SEC	T.Y.B.A. [3011] SEC-2C (2) कार्यक्रम संयोजनातील भाषिक कौशल्ये भाग - २	कार्यक्रम संयोजनातील भाषिक कौशल्ये आत्मसात करू शकतील.
		विविध कार्यक्रमांचे भाषिक कौशल्ये समजून घेऊ शकतील.
		कार्यक्रम संयोजनात प्रत्यक्ष सहभाग नोंदवतील.
		कार्यक्रमाची योजना आखणी व रूपरेषा समजून घेतील.
		आभासी कार्यक्रम संयोजनातील कौशल्ये संपादन करू शकतील.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Tal. Dist. Nashik

Mahatma Gandhi Vidyamandir`s
Arts, Science & Commerce College, Harsul
Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - M. A. - 1

Class – M.A. 1

Semister – I

Paper	Course title	Outcome
CC-1	भाषाव्यवहार आणि भाषिक कौशल्ये भाग १	भाषिक जाणीव विकसित होईल.
		भाषेचे विविध व्यवहार व साहित्याच्या संर्भातील भाषाव्यवहार याविषयीच्या आकलन होईल.
		पदव्युत्तर पातळीवरील विद्यार्थ्यांच्या वाङ्मयीन आणि जीवनविषयक जाणीव होईल.
		साहित्यकृतीच्या चिकित्सक अभ्यासाची प्रवृत्ती विकसित होईल.
		नवनवीन जीवन क्षेत्रातील भाषाविषयक कौशल्ये ग्रहणानन्तर रोजगार क्षमतांची आणि प्राविण्यांची निर्मिती होईल.
		भाषेची सर्जनशील प्रक्रिया समजून घेतील.
CC-2	मराठी साहित्याचा इतिहास (इ.स. १८१८ ते इ.स. १९२०	कौशल्यात्मक उपयोजनासाठी विद्यार्थांची तयारी करतानाच विविध जीवनक्षेत्रातील भाषाविषयक कौशल्ये आत्मसात करतील.
		साहित्यकृतीच्या चिकित्सक अभ्यासाची प्रवृत्ती विकसित होईल.
		विशिष्ट कालखानादातील मराठीतील अभिजात साहित्यकृर्तीचा संस्कार घडवून साहित्यविषयीची अभिरुची निर्माण होईल.
		वैचारिक जाणिवा प्रगल्भ होण्यास मदत होईल.
		मराठी साहित्याच्या परंपरेचे स्थूल परिचय होईल.

CC-3	ऐतिहासिक भाषाविज्ञान	भाषेचे जीवनातील कार्य व महत्व वेगवेगळ्या अभ्यासपद्धतींद्वारे समजावून घेतील.
		भाषाविज्ञानातील प्रक्रिया समजावून घेतील.
		ऐतिहासिक भाषाभ्यासपद्धती, मराठी भाषेचा उत्पत्ती काळ व टप्पा टप्प्याने भाषेच्या वाटचालीचा ऐतिहासिक मागोवा परिचय होईल.
		समाज भाषाभ्यास पद्धतीचे आकलन होईल.
		समाज भाषाविज्ञानातील विविध सिद्धांत, संकल्पनांचा परिचय होईल.
CBOP	ग्रामीण साहित्य	साहित्याचा सूक्ष्म पातळीवर अभ्यास करण्याची क्षमता विकसित होईल.
		ग्रामीण साहित्याच्या परंपरेचे स्थूल ज्ञान मिळेल.
		वैचारिक जाणिवा प्रगल्भ होण्यास मदत होईल.
		ग्रामीण साहित्याच्या परंपरेचे स्थूल ज्ञान होईल.
		मराठीतील विविध साहित्य प्रवाहांचा परिचय होईल.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal.Trymbakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - M. A. - 1

Class – M.A. 1

Semister – I I

Paper	Course title	Outcome
CC-5	भाषाव्यवहार आणि भाषिक कौशल्ये भाग - २	भाषिक जाणीव विकसित होईल.
		भाषेचे विविध व्यवहार व साहित्याच्या संर्भातील भाषाव्यवहार याविषयीच्या आकलन करू शकतील.
		पदव्युत्तर पातळीवरील विद्यार्थ्यांच्या वाङ्मयीन आणि जीवनविषयक जाणीव होईल.
		साहित्यकृतीच्या चिकित्सक अभ्यासाची प्रवृत्ती विकसित होईल.
		नवनवीन जीवन क्षेत्रातील भाषाविषयक कौशल्ये ग्रहणानन्तर रोजगार क्षमतांची आणि प्राविण्यांची निर्मिती होईल.
		भाषेची सर्जनशील प्रक्रिया समजून शकतील.
CC-6	मराठी साहित्याचा इतिहास (इ.स. १९२० ते इ.स. २०१०)	साहित्यकृतीच्या चिकित्सक अभ्यासाची प्रवृत्ती विकसित होईल.
		मराठीतील अभिजात साहित्यकृतींचा संस्कार घडवून साहित्यविषयीची अभिरुची निर्माण करू शकतील
		वैचारिक जाणिवा प्रगल्भ होण्यास मदत होईल.
		मराठी साहित्याच्या परंपरेचे स्थूल ज्ञान मिळेल.
		समांतर साहित्य प्रवाहांची वैशिष्ट्ये समजून घेऊ शकतील.

CC-7	समाज भाषाविज्ञान	भाषेचे जीवनातील कार्य व महत्व वेगवेगळ्या अभ्यासपद्धतीद्वारे समजावून घेता येईल.
		भाषाविज्ञानातील प्रक्रिया समजावून घेईल.
		सामाजिक भाषाभ्यासपद्धती , मराठी भाषेचा उत्पत्ती काळ व टप्पा टप्प्याने भाषेच्या वाटचालीचा सामाजिक मागोवा घेता येईल.
		समाज भाषाभ्यास पद्धती समजावून घेईल
		समाज भाषाविज्ञानातील विविध सिद्धांत, संकल्पनांचा परिचय होईल.
CBOP	दलित साहित्य	साहित्याचा सूक्ष्म पातळीवर अभ्यास करण्याची क्षमता विकसित करेल.
		दलित साहित्याच्या परंपरेचे स्थूल ज्ञान मिळेल.
		वैचारिक जाणिवा प्रगल्भ होण्यास मदत होईल.
		दलित साहित्याच्या परंपरेचे स्थूल ज्ञान मिळते.
		मराठीतील विविध साहित्य प्रवाहांचा परिचय करून घेता येईल.

Dr. kiran Pingale

Dr. Motiram Deshmukh

Principal
M. G. Vidyamandir's
Arts, Science & Commerce College
Harsul, Tal Trymbakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - M. A. – 2

Class – M.A. 2

Semister – III

Paper	Course title	Outcome
CC-9	प्रसारमाध्यमांसाठी लेखन कौशल्ये भाग १	भाषिक जाणीव विकसित होतील.
		प्रसारमाध्यमासाठी लेखन कौशल्ये आत्मसात करता येईल.
		प्रसारमाध्यमांचे समाजातील महत्व विशद करू शकतील.
		प्रसारमाध्यमांच्या स्वरूपाचे ज्ञान व आकलन होईल.
		दृकश्राव्य माध्यमांसाठी लेखन करण्याची क्षमता विकसित होईल.
		मराठी साहित्यातील विविध प्रकार विद्यार्थी आत्मसात करतील.
CC-10	साहित्य समीक्षा	कौशल्यात्मक उपयोजनासाठी विद्यार्थ्यांची तयारी करतानाच विविध जीवनक्षेत्रातील भाषाविषयक कौशल्ये आत्मसात करतील.
		साहित्य व समीक्षा व्यवहाराच्या क्षमता विकसित होतील.
		समीक्षेची संकल्पना समजून घेता येईल.
		समीक्षा व्यवहारातील मुल्यमापनाचा परिचय होईल.
		विविध समीक्षापद्धती त्यांचे विचारव्यूह, दृष्टी समजावून घेतील.

CC-11	नेमलेल्या मध्ययुगीन साहित्यकृतींचा अभ्यास भाग १	साहित्य व साहित्यिकांच्या जीवनप्रेरणा आणि जीवनदृष्टी समजावून घेता येतील
		मध्ययुगीन कालखंडातील साहित्यप्रकार संकल्पना व स्वरूप समजावून घेतील.
		साहित्यकृतीची वैशिष्ट्ये जाणून घेऊन आकलन होईल.
		साहित्यकृतीतील वाङ्मयीनमूल्ये व जीवन मूल्ये जाणून घेता येतील.
		कालखंड आणि साहित्यकृतीच्या निर्मितीचा अनुबंध शोधता येईल.
CBOP	लोकसाहित्याची मुलतत्त्वे आणि मराठी लोकसाहित्य भाग - १	वाचन, आस्वादन, विश्लेषण, वर्गीकरण, मूल्यनिर्णयन या प्रक्रियेतून वाङ्मय आकलनाची क्षमता वृद्धिंगत होईल.
		साहित्याचा तौलनिक अभ्यास, भाषांतरमीमांसा, प्रभाव अभ्यास, आंतरविद्याशाखीय दृष्टी, परभाषेतील समकालीन साहित्यकृती यातून विद्यार्थ्यांच्या साहित्याभ्यासाला परिपूर्णता येईल.
		लोकसाहित्याच्या मुलतत्वाची ओळख व परिचय होईल.
		मराठीतील लोकसाहित्याच्या संकलन, संशोधन व मुल्यमापनास चालना मिळेल.
		लोकसाहित्य संकल्पना समजावून घेता येईल.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Science & Commerce College
Tal.Trymbakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir`s

Arts, Science & Commerce College, Harsul

Tal. Tryambakeshwar, Dist. – Nashik

Department of Marathi

Course Outcomes - M. A. – 2

Class – M.A. 2

Semister – I V

Paper	Course title	Outcome
CC-13	प्रसारमाध्यमांसाठी लेखन कौशल्ये भाग - २	भाषिक जाणीव विकसित होईल.
		प्रसारमाध्यमासाठी लेखन कौशल्ये आत्मसात करता येईल.
		प्रसारमाध्यमांचे समाजातील महत्व विशद करता येईल.
		प्रसारमाध्यमांच्या स्वरूपाचे ज्ञान आत्मसात करेल.
		दृकश्राव्य माध्यमांसाठी लेखन करण्याची क्षमता विकसित होईल.
		मराठी साहित्यातील विविध प्रकार विद्यार्थी आत्मसात करेल.
CC-14	साहित्य संशोधन	साहित्य व साहित्यिकांच्या जीवनप्रेरणा आणि जीवनदृष्टी समजावून घेता येईल.
		मध्ययुगीन कालखंडातील साहित्यप्रकार संकल्पना व स्वरूप समजावून घेता येईल.
		साहित्यकृतीची वैशिष्ट्ये जाणून घेतील.
		साहित्यकृतीतील वाङ्मयीनमूल्ये व जीवन मूल्ये जाणून घेता येईल.
		कालखंड आणि साहित्यकृतीच्या निर्मितीचा अनुबंध शोधता येईल.

CC-15	नेमलेल्या मध्ययुगीन साहित्यकृतींचा अभ्यास भाग - २	साहित्य व साहित्यिकांच्या जीवनप्रेरणा आणि जीवनदृष्टी समजावून घेता येईल.
		मध्ययुगीन कालखंडातील साहित्यप्रकार संकल्पना व स्वरूप समजावून घेता येईल.
		साहित्यकृतीची वैशिष्ट्ये जाणून घेतील.
		साहित्यकृतीतील वाङ्मयीनमूल्ये व जीवन मूल्ये जाणून घेता येईल.
		कालखंड आणि साहित्यकृतीच्या निर्मितीचा अनुबंध शोधता येईल.
CBOP	लोकसाहित्याची मुलतत्त्वे आणि मराठी लोकसाहित्य भाग – 2	वाचन, आस्वादन, विश्लेषण, वर्गीकरण, मूल्यनिर्णयन या प्रक्रियेतून वाङ्मय आकलनाची क्षमता वृद्धिंगत होईल.
		साहित्याचा तौलनिक अभ्यास, भाषांतरमीमांसा, प्रभाव अभ्यास, आंतरविद्याशाखीय दृष्टी, परभाषेतील समकालीन साहित्यकृती यातून विद्यार्थ्यांच्या साहित्याभ्यासाला परिपूर्णता येईल
		लोकसाहित्याच्या मुलतत्वाची ओळख करून देतील.
		मराठीतील लोकसाहित्याच्या संकलन, संशोधन व मुल्यामापानास चालना देतील.
		लोकसाहित्य संकल्पना समजावून घेता येईल.

Dr. kiran Pingale

Dr. Motiram Deshmukh
Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal-Aurangabad(East), Dist.Aurangabad

ENGLISH DEPARTMENT : COs & POs

Criteria II (2.6.1): Course Outcomes (2020-2021)		
Subject	**Program and Course**	**Course / Program/ Program Specific Outcomes**
	B.A. English	**Program Outcomes**
		After successfully completing this Programme students will be able to:
		PO1. Understand major and minor forms of literature
		PO2. Able to understand the literary theories, terms and concepts in criticism
		PO3. Able to understand structure and function of grammar
		PO4. Use English both in formal and informal situations
		PO5. Know phonological and morphological aspects of English
		PO6. Able to understand value of literature in life
		PO7. Able to understand the cultures of different societies in the world through literary works
		PO8. Able to get jobs in government and private sectors
		PO9. Have enriched confidence to appear for competitive examinations like UPSC, MPSC, BANK, SSC etc.
		PO10. Be a good writer or poet in English language
	Title of Course	**Course Outcomes**
	F.Y.B. A. English	
	FYBA, Com. English	This course will enable the students:
		CO1. Ability to comprehend the written text.
		CO2. Develops their skills of interpretation and self-expression.
		CO3. Able to use basic grammar in their writing.
		CO4. Able to read literary forms in appropriate intonation pattern.
		CO5. Able to read, write, speak effectively in English language.

ENGLISH DEPARTMENT : COs & POs

		CO6. Ability to appreciate ideas and look at with their point of view.
	FYBA, Optional English	This course will enable the students:
		CO1. Ability to understand the basics of phonology of English so that they can pronounce better and speak English correctly.
		CO2. Ability to understand world through stories, poems and plays.
		CO3. Able to interact with other cultures.
		CO4. Able to know the importance of phonology and grammar.
		CO5. Able to understand the poetical types.
		S.Y.B. A. English
	SYBA, Com. English	This course will enable the students to:
		CO1. Able to know the communicative power of English.
		CO2. Ability to use rights words in the right context.
		CO3. Able to write descriptive, analytical and comparative analyses.
		CO4. Able to read properly with clear understanding.
		CO5. Make use of literature to study the various cultures around the world.
	SYBA, (DSC-1A) OldSpecial Paper-I (S-1) Title of the Paper: Appreciating Drama	This course will enable the students to:
		CO1. Able to study "Drama" as a major form of literature from different parts of the world.
		CO2. Ability to identify elements and the type of drama.
		CO3. Able to think differently from the usual day-to-day thoughts.
		CO4. Ability to use own imagination to think outside the text and could think more to write effectively.
		CO5. Able to understand the literary history and cultural background of the period.
	S. Y. B. A**(DSC-2A)** Special Paper-II (S-2) Title of the Paper: Appreciating Poetry	This course will enable the students to:
		CO1. Ability to read, appreciate and critically evaluate the poetry.
		CO2. Ability to recognize poetry from a variety of culture and historic period.
		CO3. Able to analyse the poetry and its elements.
		CO4. Able to identify musical aspects of poetry.
	S. Y. B. A. (SEC-1A), General English (G-2) Title of the Paper: Advanced study of English Language	This course will enable the students to:
		CO1. Able to identify different types of short stories in English.
		CO2. Able to use some advanced units of language and technical aspects and their practical usage
		CO3. Able to know human behaviour through work of art.
		CO4. Becomes efficient users of language.
		T.Y.B. A. English
	TYBA:- Compulsory English	This course will enable the students to:
		CO1. Become competent users of English in real life situation.
		CO2. Able to get cultural experiences through literature.

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		CO3. Able to write for media through the effectiveness of communicative skills and soft skills
		CO4. Make uses of language in literature.
		CO5. Able to study the difference between the literary works like poem and short- story.
	T.Y.B.A. Special Paper III (S-3) Title of the Paper: Appreciating Novel	This course will enable the students to:
		CO1. Able to understand basics of novel as a literary form.
		CO2. Ability to study different types and aspects of novel.
		CO3. Make use of literary sensibility to study cultural diversity through novels.
		CO4. Able to understand the intellectual traditions through literary works.
		CO5. Able to think with new perspective about any kind of genre or literary work.
	T.Y.B.A. Special Paper- IV (S-4)	This course will enable the students to:
		CO1. Able to study the basics of literary criticism.
		CO2. Ability to understand the nature and historical development of criticism
		CO3. Make use of literary terms in writing
		CO4. Able to interpret literary works in the light of the critical approaches
		CO5. Ability to study complex ideas and simplify it.
	T.Y.B.A General paper- III (G-3)	This course will enable the students to:
		CO1. Able to understand creative usage of language.
		CO2. Able to study how literature expresses the culture of the particular era.
		CO3. Ability to compare literary work with their life and inculcate moral values in them.
		CO4. Study language and its function as well as formation of language
	S.Y.B. Sc., Com. English	
	S.Y. B.sc Com. English	This course will enable the students to:
		CO1. Communicate in English language
		CO2. Understand the sentence formation and difference between the different kinds of sentences
		CO3. To face the challenging tasks like interviews, presentation

		and writing skill.
		CO4. Understand the vocabulary and use it in daily communication.
		CO5. To know the beauty of nature through the literary works like poem.
		CO6. Understand the society with different perspectives.

Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal.Tryambakeshwar, Dist.Nashik

Dr.Rajani S.Patil

Dept.of English

Mahatma Gandhi Vidyamandir's
Arts, Science & Commerce College Harsul
Tal. Tryambakeshwar, Dist. Nashik – 422 204.
(Affiliated to Savitribai Phule Pune University, Pune) ID No.PU/NS/ASC/048/(1993)
Phone No.: 02558 227292 Mob. No.: 9011027606
Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

Department of Hindi

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

Programme Name	Programme Outcomes (POs)	Programme Specific Outcomes (PSOs)	Course Name	Course Code	Course Outcomes (COs)
Bachelor of Arts	**PO 1: To develop Communication Skill and Personality development.** **PO 2:** To develop reading and writing skills. **PO 3:** To introduce students about job opportunities in translation. **PO 4:** To prepare students to go for detailed study of Hindi grammar this is essential for government jobs. **PO 5:** To develop integrated view about language and literature in them	**PSO 1: To develop skills of employability among the students.** **PSO 2:** To develop auditory, reading and writing capacity of Hindi language students. **PSO 3:** To develop a sense of love and social commitment among the students about the Nation. **PSO 4:** To encourage the learning skills and library consciousness among the students. **PSO 5:** To inspire students to spread and promote National language Hindi.	**Vaikalpik Hindi Prashnpatra -1A Sem. I & II (2019 Pattern)**	**11091 11092**	**CO 1:** To introduce students with excellent pieces of prose and poetry and create their interest in Hindi Literature. **CO 2:** To develop communication skills, group discussion, comparing and personality development. **CO 3:** To introduce students about computer, DTP, Internet and career oriented courses. **CO 4:** At the end of the course, the student should be able to communicate everyone, to participate in group discussion and competitions.
			S.Y.B.A. Hindi G-2 – Adhunik Kavya , Kahani tatha Vyavharik Hindi Revised syllabus 2020-21	**23093 24093**	**CO 1:** To familiarize them with different types of short stories and poems in Hindi. . **CO 2:** To develop integrated view about language and literature in them. **CO 3:** To prepare students to go for detailed study of Hindi grammar this is essential for government jobs.
			SYBA Hindi S-1 Kavyashastra / Sahitya ke Bhed Revised Syllabus	**23091 24091**	**CO 1:** To introduce students the scientifically study of Hindi literature and its different terms. **CO 2:** To introduce students various types of Hindi Literature, Drama, Novel and prose.

Mahatma Gandhi Vidyamandir's
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Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

			2020-21		CO 3: To introduce students to the basics of literary criticism. CO 4: To encourage students to interpret literary works in the light of critical approaches.
			SYBA Hindi S-2 Madhyayugin Hindi Kavya and Upanyas Sahitya / Natak	23092 24092	CO 1: To introduce students to the basics of novel as a literary form and create their interest in reading novels. CO 2: To develop interest among the students to appreciate and analyze drama. CO 3: To introduce students the middle ages of Hindi literature and literature.
			SYBA Hindi SEC 2A Anuvad Swarup evam Vyavhaar / Madhyam Lekhan	23096 24096	CO 1: To introduce students about job opportunities in translation. CO 2: To develop translation skills in Hindi, Marathi and English. CO 3 : To introduce students to writing medium, audio-visual media. CO 4: To develop skills of employability among the students.
			SYBA Hindi MIL – Hindi Bhasha Shikshan	23012 24012	CO 1: To introduce students scientific study of language. CO 2: To introduce students to the national language and its history. CO 3: To develop fluency and writing skills in

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			TYBA Hindi C-3 Srujan Sandarbh, Kavyasatak evam Vyakaran 2013 Pattern	**3095**	Hindi Language CO 1: To introduce students to the basics of Autobiography as a literary form and create their interest in reading biographies. CO 2: To introduce students to the basics of prose and develop their interest in reading poetry and prose. CO 3: To prepare students to go for detailed study of Hindi Grammar this is essential for government jobs.
			TYBA Hindi S-3 Hindi Sahitya ka Itihaas	**3096**	CO 1: To introduce students to the History of Hindi Literature. CO 2: To introduce students to the best Hindi literature n their literature. CO 3: To develop literary sensibility and sense of cultural diversity in students.
			TYBA Hindi S-4 Kavyashastra	**3097**	CO 1: To introduce students to the basics of literary criticism. CO 2: To introduce students to the scientifically study of Hindi literature and its different terms. CO 3: To encourage students to interpret literary

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				works in the light of the critical approaches

Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal.Tryambakeshwar, Dist.Nashik

Mahatma Gandhi Vidyamandir's
Arts, Science & Commerce College Harsul
Tal. Tryambakeshwar, Dist. Nashik – 422 204.
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Department of Political Science

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

Programme Name	Programme Outcomes (POs)	Programme Specific Outcomes (PSOs)	Course Name	Course Code	Course Outcomes (COs)
Bachelor of Arts	**PO 1:** To understand the social, cultural, political, religious and Political conditions of society. **PO 2:** Realization of human values and sense of social service. **PO 3:** To realize the sense of responsible and dutiful citizen. **PO 4:** Emerged as multifaceted personality who is self-dependent; earning his own bread and butter and also create opportunities. **PO 5:** Realized that pursuit of knowledge is a lifelong process and in combination with untiring efforts	**PSOs 1:** To Provide a basic understanding of political concepts and theories. **PSOs 2:** To understand the various aspects and features of political science. **PSOs 3:** To inculcate the students about principles and functions of financial system. **PSOs 4:** To understand the concept, theories, process and phases of political development. **PSOs 5:** At the end of the programme, the student should be	**Introduction To Indian Constitution Sem. I & II**	11161A, 11162A	**CO1)** To acquaint students with the important features of the Constitution of India and with the basic framework of Indian Government. **CO 2)** To familiarize students with the working of the Constitution of India.
			An Introduction To Political Ideologies	**23164**	**CO 1)** Role of different political ideologies and their impact in politics. **CO 2)** Close link between an idea and its actual realization in public policy. **CO 3)** Legacy of all the major ideologies.

	and positive attitude are necessary qualities for leading a successful life. **PO 6:** Developed various skills such as LSRW skill, Comprehension, Knowledge etc. which will help students in express their ideas and views clearly and effectively.	able to develop critical thinking about the political issues.			
			Political Ideologies (G-3)	3167	This paper studeis the role of different political ideologies and their impact in politics. Each ideology is critically studied in its historical context. In course of its evolution and development, the different streams and subtle nuances within each ideology, the changes and continuities in its doctrine and its relevance to contemporary times are highlighted. The close link between an idea and its actual realization in public

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					policy needs to be explained as well. The philosophical basis of the ideologies is emphasized with special emphasis on key thinkers and thier theoretical formulations. The legacy of all the major ideologies is to be critically assessed.
			Western Political Thought	**23161**	**CO** 1) Major traditions of thought that have shaped political discourse in different parts of the world. **CO** 2) The great diversity of social contexts and philosophical visions. **CO** 3) The history of political thought as a series of critical, interconnected and open-ended conversations about the ends and means of the good life.
			Political Journalism	**23162**	**CO** 1) Complex relationship between the communication, media and power politics.

			CO 2: Critical appraisal practices of political image management, campaign, propaganda and censorship. **CO 3:** Indian context of political Journalism.
	Public Administration (S - 3)	**3168**	This paper is an introductory course in Public Administration. The essence of Public Administration lies in its effectiveness in translating the governing philosophy into programmes, policies and activities and making it a part of community living. The paper covers personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed administrative salience and capabilities to deal with the process of change. The recent development and particularly the emergence of New Public Administrations are incorporated within the

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					larger paradigm of democratic legitimacy. The importance of legislative and judicial control over administration is also highlighted.
			International Politics (S - 4)	**3169**	This paper deals with concepts and dimensions of international relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. It highlights various aspects of conflict and conflict resolution, collective security and in the specifically of the long period of the post Second World War phase of the Cold War, of detente and Deterrence leading to theories of rough parity in armaments.

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M. G. Vidyamandir's
Arts, Science & Commerce College
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Harsul

Department of Geography

B.A. Geography

After successful completion of B.A. geography students will be able to achieve following knowledge:-

Class	Course Outcome
FYBA	CO1: Students are able to understand basic concepts in physical geography and human geography. CO2: Students are acquaint with the utility and application of physical and human geography. CO3: Students develop theoretical, applied and computational skills.
SYBA	CO1: Students are able to understand about the disaster management, tourism geography CO2: The geographical maturity of students in their current and future career shall develop
TYBA	CO1: Students are acquaint with nature of man environment relationship and human capability to adopt and modify the environment under its varied conditions from primitive life style to the modern living. CO2: Students are able to identify and understand environment and population in terms of their quality and spatial distribution pattern and comprehend the contemporary issues facing the global community. CO3: Students are able to understand the SOI Toposheets Arial Photographs & Satellite Image and acquire the knowledge of physical & cultural features. CO4: Students are train to handle these statistics towards analyzing the geographical problems. CO5: Students are acquaint with geography of our Nation and aware of the magnitude of problems and Prospects at National level.
FYBSc	CO1: Students are able to understand basic concepts about atmosphere, geography, hydrosphere and human geography CO2: Students are develops practical skills in physical and human geography
SYBSc	CO1: Students are able to understand about watershed and resources geography CO2: Students develops applied and practical skills in mapping, graphing and surveying.

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F.Y.B.A. Geography

The syllabus of FYBA Geography for Choice based Credit System (CBCS) to be implemented form 2019-2020.
Upon successful completion of this course, the student will be able to:

Semester	Course No	Name of the Course
I	Gg- 110 (A)	Physical Geography
II	Gg- 110 (B)	Human Geography

CO1: Students learn the basic concepts in Physical geography.
CO2: Students understand the latest concept in Physical geography
CO3: Students acquaint with the utility and application of Physical geography in different regions and environment.
CO4: Students aware about Earth system (Lithosphere, Atmosphere, Biosphere and Hydrosphere)
CO5: Know the geographical maturity of students in their current and future courses shall develop.
CO6: Develop the theoretical, applied and computational skills among the students.

F.Y.B.Sc. Geography

The syllabus of FYBsc Geography for Choice based Credit System (CBCS) to be implemented form 2019-2020.

Paper	Semester I	Semester II
P - I	GG 111- Introduction to Physical Geography - I (Geomorphology)	GG 121-Introduction to Human Geography
P – II	GG 112-Introduction to Physical Geography-II (Geography of Atmosphere and Hydrosphere)	GG 122- Population and Settlement Geography
P – III	GG 113- Practicals in Physical Geography	GG 123- Practical in Human Geography Class

CO1: Students acquaint with the basic concepts in Geomorphology.
CO2: Students acquaint with the utility and applications of Geomorphology in different areas and environment.
CO3: Students aware about the need of protection and conservation of different landforms.

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Tal. Tryambakeshwar, Dist. Nashik – 422 204.
(Affiliated to Savitribai Phule Pune University, Pune) ID No.PU/NS/ASC/048/(1993)
Phone No.: 02558 227292 Mob. No.: 9011027608
Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

Department of Psychology

B.A. Psychology

Programme Outcomes:

After successful completion of B.A. Psychology Programme students will be able to achieve:-

PO1: Theory and Content of Psychology: Identify the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

PO2: Research Methods in Psychology: To acquaint with basic research methods in psychology, including research design, data analysis, and interpretation.

PO3: Applications of Psychology: In personal, social, and organizational issues.

PO4: Critical Thinking Skills in Psychology: Enhance the critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behaviour and mental processes.

PO5: Communication Skills: Communicate effectively in a variety of formats.

PO6: Personal Development: develop insight into their own and others' behavior and mental processes and apply effective strategies for self-management and self-improvement.

PO7: Career Planning and Development: With realistic ideas about how to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

Programme Specific Outcomes:

PSO1. Enhancement of the stress management skills.

PSO2. Enhancement to coping skills with different problems in life.

PSO3. Enabling to measure attitude, aptitude, interest, adjustment etc. within the people.

PSO4. To use of basic psychological tests and experiments.

PSO5. Diagnosis of mental disorder and treatment.

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Class	Subject	Course Outcome
FYBA	General Psychology (G-1)	Co.1. Students acquaint with the basic psychological processes and their applications in day to day life.
		Co.2. Students develop the ability to evaluate the cognitive processes, learning and memory of an individual
		Co.3. Students acquire the importance of motivation and emotion of the individual.
		Co.4. Students acquaint with the Personality, Intelligence and Problem Solving of individuals by developing their psychological processes and abstract potentials.
SYBA	Social Psychology (G-2)	Co.1. Students acquaint with the basic concepts, theories and applications of social psychology.
		Co.1.Students knows the nature of self, concept of attitude and prejudice of the individual.
		Co.2. Students familiarize with group behavior.
		Co.3. Students know the importance of Close Relationships and Pro- social behavior
		Co.3. Students assess the interactional processes, love and aggression in our day today life.
		Co.4. Students acquaint with the group dynamics and individual in the social world.
SYBA	Abnormal psychology (S-1)	Co.1. Students acquaint with the recent classification of abnormality.
		Co.2. Students acquire the knowledge about the causes, symptoms and treatments of various types of psychological disorders.
SYBA	Developmental Psychology (S-2)	Co.1. Students acquaint with the basic concepts of human development processes.
		Co.2. Students understand the influences of various factors on developmental process.
TYBA	Applied Psychology (G-3)	Co.1. Students acquaint with the applications of psychology in various areas.
		Co.2.Students aware with the problems and solutions in various applied fields.
		Co.3. Students acquaint with the importance and significance of positive psychology as newly emerging branch of psychology.
		Co.4. Students knows about the role of psychologists in various applied fields.
		Co.5. Students acquaint with the various counseling skills.
		Co.6. Students familiarize with the problems and solutions of consumer psychology.
		Co.7. Students acquaint with the professional, legal and ethical issues in forensic psychology.
		Co.1.Students acquaint with the basic research methods in psychology, including research design, data analysis, and interpretation.
		Co.2. Students know the basic concepts of Experimental Psychology.

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TYBA	Scientific Research and Experimental Psychology (S-3)	Co.3. Students acquaint the different methods of psychophysics, learning, and reaction time.
		Co.4. Students acquaint with the psychological tests related to intelligence, aptitude and personality.
		Co.5.Students develop the scientific experimental and research attitudes.
		Co.6.Students facilitates comprehension of the theoretical concepts through research work.
TYBA	Psychological Practical: Tests & Experiments (S-4)	Co.1. Students acquaint the basic concepts of Experiments in Psychology.
		Co.2. Students acquaint the students with the basic concepts of Tests in Psychology.
		Co.3. Students acquaint how to conduct the experiments and to understand its practical applications
		Co.4.Students acquaint with how to administer the tests and to understand its practical applications.
		Co.5. Students knows the basic knowledge of elementary statistics.
		Co.6. Students acquaints and evaluates human abilities through psychological testing.

F.Y.B.A. Psychology

The syllabus of FYBA Psychology for Choice based Credit System (CBCS) to be implemented form 2019-2020.

Course	Class
DSC-PSY-1A: Foundations of Psychology	**FYBA (Sem I)**
	After the completion of this course students will be able to demonstrate the following competencies: CO1: Understand the basic psychological processes and their applications in day to day life. CO2: Develop the ability to evaluate cognitive processes, learning and memory of an individual. CO3: Understand the importance of motivation and emotion of the individual. CO4: Understand the personality and intelligence of the individuals by developing their psychological processes and abstract potential
DSC-PSY- 1B : Introduction to Social Psychology	**FYBA (Sem II)**
	After the completion of this course students will be able to demonstrate the following competencies: CO1: Understand the basics of social psychology. CO2: Understand the nature of self, concept of attitude and prejudice of the individual. CO3: Assess the interactional processes, love and aggression in our day today life. CO4: Understand group dynamics and individual in the social world.

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Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

S.Y.B.A. Psychology

The syllabus of SYBA Psychology for Choice based Credit System (CBCS) to be implemented form 2020-2021.

Course	Class
DSE-1A: Psychology of Abnormal Behavior-I (S-1)	**SYBA (Sem III)** **After the completion of this course students will be able to:** CO1: Acquire the knowledge about the symptoms, diagnostic criteria, and causes of various psychological disorders CO2: Examine multiple probable causes and correlates of behaviour. CO3: Understand critiques, limitations, and implications of diagnosis and classification of psychological diseases. CO4: Create awareness about mental health problems in society.
DSE-2A: Developmental Psychology (S-2)	**After the completion of this course students will be able to:** CO1: Understand the importance, characteristics and concern in lifespan development CO2: Understand biological, cognitive, and socio-emotional processes CO3: Understand the periods of development, the significance of age, and discuss developmental issues. CO4: Understand Psychoanalytic, Cognitive, Behavioural and Social Cognitive, Ethological, Ecological and Eclectic theories of development CO5: Understand methods of data collection and research designs used in Life-span development research
SEC- 1A: Health Psychology (G-2)	**After the completion of this course students will be able to:** CO1: Understand health psychology and arrive at the introduction to the role of psychology in health. CO2: Understand the nature of stress and coping CO3: Understand various factors related to health and diseases. CO4: Understand quality of life and promoting the good health.
	SYBA (Sem IV)
DSE-1B: Psychology Of Abnormal Behavior-II (S-1)	**After the completion of this course students will be able to:** CO1: Learn descriptions, and theories underlying diagnostic nosology of psychiatric disorders. CO2: Learn and understand benefits, critiques, limitations, and implications of diagnosis and classification. CO3: Help students to acquire the knowledge about the symptoms, diagnostic criteria, and causes of various psychological disorders. CO4: Examine multiple probable causes and correlates of behaviour. CO5: Create awareness about mental health problems in society.

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Phone No.: 02558 227292 Mob No.: 9011027608
Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

DSE-2B: Theories of Personality (S-2)	**After the completion of this course students will be able to:** CO1: Understand the concept of personality with various theories of personality on the basis of personality psychology. CO2: Understand different framework and theoretical aspects of personality. CO3: Understand and observe, interpret individual differences in behaviour in the light of sound theoretical systems of personality. CO4: Understand comprehensive overview of the major theories personality.
SEC- 1B: Positive Psychology (G-2)	**After the completion of this course students will be able to:** CO1: Understand how the positive psychology as the science of happiness, human strengths, positive aspects of human behavior and 'psychology of well being.' CO2: How we lead our lives, find happiness and satisfaction, and face life's challenges. CO3: How positive psychology has become an evolving stream of research and theory from many different areas of psychology.

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Harsul, Tal.Tryambakeshwar Dist.Nashik

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Department of Economics

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

Programme Name	Programme Outcomes (POs)	ProgrammeSpecific Outcomes (PSOs)	Course Name	Course Code	Course Outcomes (COs)
Bachelor of Arts	**PO 1:** To understand the social, cultural, political, religious and economic conditions of society. **PO 2:** Realization of human values and sense of social service. **PO 3:**To realize the sense of responsible and dutiful citizen. **PO 4:**Emerged as multifaceted personality who is self-dependent; earning his own bread and butter and also create opportunities. **PO 5:**Realized that pursuit of knowledge is a lifelong process and in combination with untiring efforts and positive	**PSOs 1:** To Provide a basic understanding of economic concepts and theories. **PSOs 2:** To understand the various aspects and features of Indian economy. **PSOs 3:** To inculcate the students about principles and functions of financial system. **PSOs 4:** To understand the concept, theories, process and phases of economic development. **PSOs 5:**At the end of the programme, the student should be able to develop critical thinking about the economic issues.	**Indian Economic Environment Sem. I & II (2019 Pattern)**	**11151 11152**	**CO 1:**Ability to develop an understanding of the economic environment and the factors affecting economic environment. **CO 2:**Ability to develop awareness on the various new developments in the different sectors of an economy – agriculture, industry, services, banking, etc. **CO 3:**Ability to compare and contrast Indian Economy with other world economies. **CO 4:**At the end of the course, the student should be able discuss and debate on the various issues and challenges facing the Indian Economic Environment.
			Financial System Sem. III & IV (2019 Pattern)	**23153 24153**	**CO 1:**To understand fundamentals of modern financial system. **CO 2:**To understand the recent trends and developments in banking

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Web :www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

	attitude are necessary qualities for leading a successful life. **PO 6:** Developed various skills such as LSRW skill, Comprehension, Knowledge etc. which will help students in express their ideas and views clearly and effectively.				system. **CO 3:** To understand the role of the Reserve Bank of India in Indian financial system. **CO 4:** To provide the knowledge of various financial and non-financial institutions. **CO 5:** To provide the students the intricacies of Indian financial system for better financial decision making.
			Economic Development & Planning (2013 Pattern)	3157	**CO 1:** To introduce basic concepts of economic development and growth. **CO 2:** To understand constraints on development process. **CO 3:** To provide basic understanding of theories and approaches of economic development. **CO 4:** To understand the relationship between foreign capital and development. **CO 5:** To know the macro-economic policies. **CO 6:** To introduce basic principles of economic planning

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Web : www.mgv.org.in/harsulcollege
Mob. No.: 9011027608
E-mail: harsulcollege@gmail.com

Department of History

Programme Outcomes Programme Specific Outcomes and Course Outcomes

Programme Name	Programme Outcomes (POs)	Programmes Specific Outcomes (PSOs)	Course name	Course Code	Course Outcomes (Cos)
Bachelor of Arts	**PO 1:** To understand the social, cultural, political, religious and economic conditions of society. PO 2: Realization of human values and sense of social service. **PO 3:** To realize the sense of responsible and dutiful citizen. **PO 4:** Emerged as multifaceted personality who is self-dependent; earning his own bread and butter and also create opportunities. **PO 5:** Realized that pursuit of knowledge is a lifelong process and in combination with untiring efforts and positive attitude are necessary qualities for leading a successful life. **PO 6:** Developed various skills such as LSRW skill, Comprehension, Knowledge etc. which will help students in express their ideas and views clearly and effectively.	**PSOs 1:** Understand the basic themes, concepts, chronology and the Scope of Indian History. **PSOs-2:** Understand the history of the countries other than India with comparative approach. **PSOs-3:** Think and argue historically and critically in writing and discussion. **PSOs-4:** Prepare for various types of Competitive Examinations **PSOs-5:** Critically recognize the Social, Political, Economic and Cultural aspects of History. **PSOs-6:** To study further in the applied field of history as archaeology.	**Early India: From Pre-History to the Age of Mauryas**	**11171**	The history of Early India is a crucial part of Indian history. It is a base for understanding the entire Indian history. The course is aimed at helping the student to understand the history of early India from the prehistoric times to the age of the Mauryas. It attempts to highlight the factors and forces behind the rise, growth and spread of civilization and culture of India along with the dynastic history. It also attempts to help the students to understand the contribution of Early Indians to polity, art, literature, philosophy, religion and science and technology. It also aims to foster the spirit of enquiry among the students by studying the major developments in early Indian history.
			Early India-Post Mauryan Age to the Rashtrakutas	**11172**	The history of India after the Mauryas is very important to understand the Developments in early India after the Mauryas, which finally led to the transition to medieval India. The course is aimed at introducing the students to the developments in different parts of India through a brief study of regional kingdoms up to the tenth century C.E. It attempts to highlight the consequences of the foreign invasions, particularly on the polity, economy, society and art and architecture. The attempt is also to instill the spirit of enquiry among the students.

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			History of Marathas 1670 to 1707	**23174**	**CO 1 :** Student will develop the ability to analyse sources for Maratha History. **CO 2 :** Student will learn significance of regional history and political foundation of the region. **CO 3:** It will enhance their perception of 17th century Maharashtra and India in context of Maratha history. **CO 4 :** Appreciate the skills of leadership and the administrative system of the Marathas.
			History of Marathas 1707 to 1818	**24174**	**CO 1:** Students will be able to analyze the Marathas policy of expansionism and its consequences. **CO 2:** They will understand the role played by the Marathas in the 18th century India. **CO 3:** They will be acquainted with the art of diplomacy in the Deccan region. **CO 4:** It will help to enrich the knowledge of the administrative skills and profundity of diplomacy.
			History of the world in 20 Century – 1914 to 1442	**3177**	**CO 1:** To orient the students with political history of Modern World. **CO 2:** To acquaint Students about the main developments in the Contemporary World (To understand to important development in 20th century World.) **CO 3:** Impart knowledge about world concepts. **CO 4:** To enable students to understand the economic transition in World during the 20th Century. **CO 5:** Become aware of the principles, forces, processes and problems of the recent times.

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Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

Harsul

Department of Botany

Programme Outcomes

2020-21

	Title of the course	Programme outcomes
Botany	**F.Y.B.Sc & S.Y.B.Sc**	1. The scope of plant diversity with respect to environmental relationships.
		2. Study of plant classification to understand the taxonomy.
		3. The utilization of plants for human beings in terms of its economic importance.
		4. Take projects, study case to understand plant biodiversity.
		5. Student learns practical work as per the syllabus prescribed by SPPU, field studies for optimizing proficiency the subject
		6. Use of IT tools, communication skills in scientific knowledge l for specific needs.
		7. Career planning.

Botany	Title of Course	Course Outcomes
		F.Y.B. Sc. Botany
	BO 111: Plant Diversity	1. Understanding about the diversity, identification, classification and economic importance of lower plants.
		2. Understanding of the students about the classification, structure, role and infectious cycle of microbes and Fungi
		3. List of various Economic Importance of Fungi.
		4. Clarify the features of Lichens.
		5. Compare and describe the salient features of Cryptogams plants.
		6. Describe the life cycles of Riccia. And explain economic importance
	BO112: Industrial Botany I and	1. Understand the pattern origin, diversification and cultivation of plants in nature.
		2. Explain the strategies for conservation of these natural resources.
	Industrial Botany II	3. Enlist a applications of different plants in various industries
		4. Recognize potential of these studies to become an entrepreneur.
		5. Extend skills related to laboratory as well as industries based studies.
		6. Explain and measure the socio-economic challenges related to plant sciences.
	BO 121: Plant Morphology and Anatomy	1. Discuss the habit of the angiosperm plant body.
		2. Explain the vegetative characteristics of the plant.
		3. Distinguish the reproductive characteristics of the plant.
		4. Distinguish and Describe the plant morphology
		5. Enlist the scope & importance of Anatomy

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		6. Clarify various tissue systems and normal and anomalous secondary growth
	Practical's based on Theory courses (Paper I and II)	1. description and classification according to S.M.Smith with reason of taxa belonging to at least one examples from each order of algae
		2. Preparation of cotton blue, Lactophenol and culture medium – PDA
		3. Examine of Life cycle of lower cryptogams and its economics importance
		4. Examine vegetative, reproductive structures and classification with reasons. Study of fungal diversity Systematic position and morphology.
		5. Identify the botanical source, plant part used and uses Economical plants
		6. Compare and summarize Morphology and Modification of root, leaf, stem, Inflorescence, flower and fruit with its modification
		7. Distinguish and compare of epidermal tissue system and mechanical tissue system normal secondary growth in stem and root of woody dicots
		S.Y.B. Sc. Botany
	1. BO 211: Taxonomy of Angiosperms and Plant community	1. Recognize , identify naming, systematic position of genera, Species and Families students
		2. Describe the floral variations in angiospermic families, their phylogeny and evolution.
		3. Trace the history of development of systems of classification emphasizing angiospermic taxa.
		4. Learn about the characters of biologically important families of angiosperms.
		5. Understand various rules, principles and recommendations of plant nomenclature.
		6. Know modern trends in taxonomy.
		7. Understand major evolutionary trends in various parts of angiospermic plants
	BO 212: Plant Physiology	1. Define and describe the various physiological life processes in plants
		2. Describe the various plant physiological Functions process
		3. Understand plant structures in the context of physiological functions of plants.
		4. They will learn about the growth and development of plants and its regulations.
		5. Understand the physiological details of photosynthesis and respiration
	BO 221: Anatomy and Embryology	1. Recognize. Describe of growth, development and reproduction in plants as well as understand the physiological and metabolic changes happening along
		2. with the environmental impact.

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		3. Understand the scope & importance of Anatomy and Embryology
		4. Understand structure and development of microsporangium and mega sporangium.
		5.
		6. Understand microsporogenesis and megasporogenesis.
		7. Understand male and female gametophytes.
		8. Know fertilization, endosperm and embryogeny
	BO 222: Plant Biotechnology	1. Concepts, tools and techniques related to invitropropagation of plants.
		2. Different methods used for genetic transformation of plants, use of Agrobacterium as a vector for plant transformation, components of a binary vector system.
		3. Various case studies related to basic and applied research in plant sciences using transgenic technology.
		4. Principles and methods used for phenotypic, genetic and molecular analysis of transgenic plants.
		5. Basic principles and modern age applications of recombinant DNA technology.
		6. Learning molecular and technical skills along with applications of the instrumentation.
		7. Designing / conducting experiments and analyzing experimental data
	Practical's based on Theory courses (Paper I and II)	1. Distinguish the families with respect to morphological characters using botanical terms, floral formula, floral diagram and classification giving.
		2. Identification and Describe of genus and species with the help of flora of the plant materials.
		3. Preparation of artificial, bracketed/indented dichotomous keys based on vegetative and reproductive characters.
		4. Analysis diurnal fluctuations in titrable acid number (TAN) values of CAM succulents.
		5. Determine the absorption spectrum of chlorophyll pigments and estimate the amount of Chl-a, Chl-b and total Chlorophylls by spectrophotometer method.
		6. Extraction and separation of free amino acid of germinating seed by circular paper chromatography.
		7. Extraction and Detection of secondary plant metabolites enzyme from suitable plant material.
		8. Enlist of various instruments used for plant biotechnology.
		9. Preparation of explants and inoculation on nutrient media for callus induction, Sub-culture of callus and regeneration of plants from callus.
		10. Demonstration DNA separation with the help of gel electrophoresis. † Study of NCBI – BLAST

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Department of Zoology

B. Sc. Zoology

After successful completion of B.Sc. Zoology students will be able to achieve following knowledge:-

Program Outcomes: B. Sc. Zoology

1. Aware students about knowledge and skill in the fundamentals and systematic of animal kingdom.
2. Understand various physiological processes of animals from different phyla.
3. Awareness about environment and its conservation processes, pollution control and its importance.
4. Gain knowledge of protection of vulnerable and endangered species
5. Information and skill of applied zoology including sericulture, apiculture, fisheries, vermiculture, agricultural pests and their control etc.
6. Gain knowledge of communicable and non-communicable diseases to improve personal and public health.

Program Specific Outcomes: B. Sc. Zoology

1. Acquire knowledge on the various aspects of life sciences, cell biology, genetics, taxonomy, physiology, applied zoology.
2. Understand good laboratory practices and safety, Carry out experimental techniques and methods of Physiology, Cell biology, Genetics, Applied Zoology, Animal ecology Sericulture.
3. Understand the applications of biological sciences is Apiculture, Fisheries, Agriculture and vermiculture.
4. The students gained the knowledge to use modern sophisticated equipments and tools.

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Programme Outcomes: FY B.Sc Zoology

The syllabus of Zoology for First year has been redesigned for Choice based Credit System (CBCS) to be implemented form 2019-2020.

Course Outcome

	SEMESTER I	SEMESTER II
CC	ZO-111 Animal Diversity I	ZO-121 Animal Diversity II
CC	ZO-112 Animal Ecology	ZO-122 Cell Biology
CC	ZO-113 Zoology Practical Paper	ZO-123 Zoology Practical Paper

ZO-111 Animal Diversity I & II

Learning outcomes for the course:

1. The student will be able to understand classify and identify the diversity of animals.

2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.

3. The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life

ZO-112 Animal Ecology
Learning outcomes for the course:

1. The learners will be able to identify and critically evaluate their own beliefs, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population.

2. To understand anticipate, analyze and evaluate natural resource issues and act on a lifestyle that on serves nature.

3. The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community.

4. The learner will be able to link the intricacies of food chains, food webs and link it with human life for its betterment and for non-exploitation of the biotic and abiotic components.

5. The working in nature to save environment will help development of leadership skills to promote betterment of environment

ZO-122 Cell Biology

Learning outcomes for Cell Biology

1. The learner will understand the importance of cell as a structural and functional unit of life.
2. The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development.
3. The dynamism of bio membranes indicates the dynamism of life. Its working mechanism and precision are responsible for our performance in life.
4. The cellular mechanisms and its functioning depends on endo-membranes and structures. They are best studied with microscopy.

Course Code: ZO113 and ZO123: Zoology Practical Paper

1. Gain knowledge to identify various animals based on morphological features.
2. Prepare the culture of Paramecium
3. Understand the principle and use of microscopes and micrometry.
4. List the various invertebrate and vertebrate animals in a given class.
5. Understand blood cells as differential and total count with normal range
6. Gain Knowledge of eutrophication

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Phone No.: 02558 227292 Mob. No.: 9011027608
Web : www.mgv.org.in/harsulcollege E-mail : harsulcollege@gmail.com

Programme Outcomes: SY B.Sc Zoology

The syllabus of Zoology for Second year has been redesigned for Choice based Credit System (CBCS) to be implemented form 2020-2021.

Course Outcome

	SEMESTER I	SEMESTER II
CC	ZO - 231 Animal Diversity III	ZO - 241 Animal Diversity IV
CC	ZO - 232 Applied Zoology I	ZO - 242 Applied Zoology II
CC	ZO - 233 Zoology Practical Paper	ZO - 243 Zoology Practical Paper

ZO231 & ZO241_ Animal Diversity III & IV

Objectives -

1. To understand the origin and advancement of higher vertebrates (tetrapoda).
2. To understandgeneral characters of different groups of higher vertebrates.
3. To classify vertebrates and to become able to understand the possible group of vertebrates observed in nature.
4. To understand different behaviours and adaptations in higher vertebrates
5. To understand affinities among different groups of higher vertebrates.

Learning Outcomes for the course -

1. The students will be able to understand, classify and identify the diversity of higher vertebrates.
2. The students will able to understand the complexity of higher vertebrates
3. The students will be able to understand different life functions of higher vertebrates.
4. The students will be able to understand the linkage among different groups of higher vertebrates.
5. The student will become aware regarding his role and responsibility towards nature as a protector, to understand his role as a trustee and conservator of life which he has achieved by learning, observing and understanding life.

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ZO 232 & ZO242 _ Applied Zoology I and II Objectives :

1. To understand the basic life cycle of the honeybees, beekeeping tools and equipments.
2. To learnfor managing beehives for honey production and pollination.
3. To understand the basic information about fishery, cultural and harvesting methods of fishes.
4. To understand fish preservation techniques.
5. To understand the biology, varieties of silkworms and the basic techniques of silk production and harvesting of cocoons.
6. To learn the different silkworm species and their host plants.
7. To study types of agricultural pests and Major insect pests of agricultural importance.
8. To study Pest control practices.

Learning Outcomes of the course:

1. The learner understands the basics about beekeeping tools, equipment, and managing beehives.
2. The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques.
3. The learner understands the biology, varieties of silkworms and the basic techniques of silk production.
4. The learner understands the types of agricultural pests, Major insect pests of agricultural importance and Pest control practices.

Course: ZY-233 & ZY243: Practicals in Zoology

1. Gain knowledge to identify various animals based on morphological features.
2. Observe the various tools, crafts and gears used in Apiary, Fishery, Sericulture and Pest control.
3. Identify the pests in agriculture and enemies in Apiary.
4. The student will be able to describe the morphology, habit and habitat, Systematic position and various systems in Scoliodon and Rat.
5. Explain the modifications and adaptations in animals
6. Explain the use of tools in Apiary, Sericulture and appliances in Pest control.
7. Describe External features and economic importance of freshwater and Marine water fishe

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Programme Outcomes: SY B.Sc Zoology

The syllabus of Zoology for Second year has been redesigned for Choice based Credit System (CBCS) to be implemented form 2020-2021.

Course Outcome

	SEMESTER I	SEMESTER II
CC	ZO - 231 Animal Diversity III	ZO - 241 Animal Diversity IV
CC	ZO - 232 Applied Zoology I	ZO - 242 Applied Zoology II
CC	ZO - 233 Zoology Practical Paper	ZO - 243 Zoology Practical Paper

ZO231 & ZO241_ Animal Diversity III & IV

Objectives –

1. To understand the origin and advancement of higher vertebrates (tetrapoda).
2. To understandgeneral characters of different groups of higher vertebrates.
3. To classify vertebrates and to become able to understand the possible group of vertebrates observed in nature.
4. To understand different behaviours and adaptations in higher vertebrates.
5. To understand affinities among different groups of higher vertebrates.

Learning Outcomes for the course -

1. The students will be able to understand, classify and identify the diversity of higher vertebrates.
2. The students will able to understand the complexity of higher vertebrates.
3. The students will be able to understand different life functions of higher vertebrates.
4. The students will be able to understand the linkage among different groups of higher vertebrates.
5. The student will become aware regarding his role and responsibility towards nature as a protector, to understand his role as a trustee and conservator of life which he has achieved by learning, observing and understanding life.

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ZO232&Zo242 Applied Zoology I & II

Objective

1. To understand the basic life cycle of the honeybees, beekeeping tools and equipments.
2. To learnfor managing beehives for honey production and pollination.
3. To understand the basic information about fishery, cultural and harvesting methods of fishes.
4. To understand fish preservation techniques.
5. To understand the biology, varieties of silkworms and the basic techniques of silk production and harvesting of cocoons.
6. To learn the different silkworm species and their host plants.
7. To study types of agricultural pests and Major insect pests of agricultural importance.
8. To study Pest control practices.

Learning Outcomes of the course:

1. The learner understands the basics about beekeeping tools, equipment, and managing beehives.
2. The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques.
3. The learner understands the biology, varieties of silkworms and the basic techniques of silk production.
4. The learner understands the types of agricultural pests, Major insect pests of agricultural importance and Pest control practices.

Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal.Tryambakeshwar Dist.Nashik

Mahatma Gandhi Vidyamandir's

Samajshri Prashantdada Hiray Arts, Science & Commerce College, Harsul

Department of Chemistry

Programme Outcomes

B. Sc. Chemistry

The programme learning outcomes involving B. Sc. degree programme in chemistry maycontain the following:

B. Sc. Chemistry	Programme Outcomes
	PO1: A systematic understanding of the fundamental concepts, principles and processes essential the academic field of chemistry, its different subfields (Industrial, Analytical, Inorganic, Organic and Physical) and its linkages with related disciplinary areas subjects.
	PO2: Technical knowledge that creates different types of professionals in the field of chemistry and related fields such as pharmaceuticals, chemical industry, teaching, research, environmental monitoring, product quality, consumer goods industry, food products, cosmetics industry, etc.
	PO3: Skills related to specialization areas within chemistry as well as within subfields of chemistry (analytical, Learning Outcomes-based Curriculum Framework for Undergraduate Education Inorganic, organic and physical), and other related fields of study, including broader interdisciplinary subfields (life, environmental and materials sciences).
	PO4: Apply appropriate methodologies in order to conduct chemical syntheses, analyses or other chemical investigations, and apply relevant knowledge and skills to seek solutions to problems that emerge from the subfields of chemistry as well as from broader interdisciplinary subfields replacing to chemistry.
	PO5: Use chemical techniques relevant to academia and industry, generic skills and global competencies, including knowledge and skills that enable students to undertake further studies in the field of chemistry or a related field, and work in the chemical and non- chemical industry sectors.
	PO6: Undertake hands on lab work and practical activities which develop problem solving abilities required for successful career in pharmaceuticals, chemical industry, teaching research, environmental monitoring, product quality, consumer goods industry, food products, cosmetics industry, etc.
	PO7: Recognize and appreciate the importance of the chemical sciences and its application in academic, industrial, economic, environmental and social contexts.

F. Y. B. Sc. Course Outcome

SEMESTER-I

CH- 101: Physical Chemistry	Course Outcome
	CO1: Students will be able to apply thermodynamic principles to physical and chemical process. Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy. Variation of enthalpy with temperature. Kirchoff's equation. Third law of thermodynamics and its applications.

	CO2: Relation between Free energy and equilibrium and factors affecting on equilibrium constant. Exergonic and endergonic reaction. Chemical equilibrium, equilibrium constant and molecular interpretation of equilibrium constant. Van't Haff equation and its application.
	CO3: Concept to ionization process occurred in acids, bases and pH scale. Related concepts such as Common ion effect hydrolysis constant, ionic product, solubility product. Degree of hydrolysis and pH for different salts, buffer solutions.
CH- 102: Organic Chemistry	**CO1:** The students are expected to understand the fundamentals, principles, and recent developments in the subject area.
	CO2: It is expected to inspire and boost interest of the students towards chemistry as the main subject.
	CO3: To familiarize with current and recent developments in Chemistry.
	CO4: To create foundation for research and development in Chemistry.
Lab Course CH-103 Chemistry Practical Coursel	**CO1:** Toxicity of the compounds used in chemistry laboratory. Safety symbol on labels of pack of chemicals and its meaning. MSDS sheet. Find out MSDS sheets of hazardous chemicals. Precautions in handling of hazardous substances like Conc. acids, ammonia, organic solvents, etc.
	CO2: Determination of heat capacity of calorimeter for different volumes. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide. Determination of integral enthalpy of solution of salts (KNO_3, NH_4Cl).
	CO3: Measurement of the pH of buffer solutions and comparison of the values with theoretical values. Preparation of buffer solution of Sodium acetate-acetic acid and determine its buffer capacity.
	CO4: To determine type and detection of extra elements (N, S, Cl, Br, I) in organic compounds. Separation of constituents of mixtures by Chromatography: Measure the Rf value in each case (a) Identify andseparate the components of a given mixture of 2-amino acids.

F. Y. B. Sc. Course Outcome
SEMESTER-II

CH- 201: Inorganic Chemistry	**Course Outcome**
	CO1: Various theories and principles applied to revel atomic structure. Origin of quantum mechanics and its need to understand structure of hydrogen atom. Schrodinger equation for hydrogen atom. Radial and angular part of hydrogenic wave functions. Significance of quantum numbers. Shapes of orbitals
	CO2: Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Huad's rule of maximum multiplicity. Discuss electronic configuration of an atom and anomalous electronic configurations. Describe stability of half-filled and completely filled orbitals. Discuss concept of exchange energy and relative energies of atomic orbitals. Explain periodicity in the following properties in details: Effective nuclear charge, shielding or screening effect; some numerical problems. Atomic and ionic size. Crystal and covalent radii. Ionization energies. Electronegativity- definition, trend, Pauling electronegativity scale. Oxidation state of elements.

	CO3: Attainment of stable electronic configurations. Define various types of chemical bonds- Ionic, covalent, coordinate and metallic. Explain characteristics of ionic bond, types of ions, energy consideration in ionic bonding, lattice and solvation energy and their importance in the context of stability and solubility of ionic compounds. Summarize Born-Lande equation and Born-Haber cycle. Define Fajan's rule, bond moment and dipole moment and percent ionic character. Describe VB approach, Hybridization with example of linear, trigonal, square planer, tetrahedral, TBP, and octahedral. Discuss assumption and need of VSEPR theory. Interpret concept of different types of valence shell electron pairs and their contribution in bonding. Application of non-bonded lone pairs in shape of molecule. Basic understanding of geometry and effect of lone pairs with examples such as ClF_3, Cl_2O, BrF_5, XeO_3 and $XeOF_4$.
CH- 202: Analytical Chemistry	**CO1:** Analytical Chemistry branch of chemistry. Perspectives of modern Chemistry. Analytical problems.
	CO2: Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution. Relation between molecular formula and empirical formula. Stoichiometric calculation. Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration. SI units, distinction between mass and weight. Units such as parts per million, parts per billion, parts per thousand, solution-dilatant volume ratio, function density and specific gravity of solutions.
	CO3: Basics of type determination, characteristic tests and classification reactions of different functional groups. Separation of binary mixtures and analysis. Elemental analysis -Detection of nitrogen, sulfur, halogen and phosphorous by Lassaigen's test. Purification techniques for organic compounds.
	CO4: Basics of chromatography and types of chromatography. Theoretical background for Paper and Thin Layer Chromatography.
	CO5: pH meter and electrodes for pH measurement. Measurement of pH. Working of pH meter. Applications of pH meter.
Lab Course CH-203	**CO1:** Synthesis of potash alum from aluminum metal (scrap). Manganese metal). Synthesis of Mohr's Salt $[(FeSO_4)(NH_4)_2SO_4]\cdot 6H_2O$
Chemistry Practical –II	**CO2:** Estimation of sodium carbonate and sodium hydrogen carbonate present in a mixture. Estimation of water of crystallization in Mohr's salt by titrating with $KMnO_4$.
	CO3: Estimation of Ca from calcium supplementary tablet by complexometric titration. Estimation of acid neutralizing capacity of antacids like Gelusil tablet. Gelusil syrup etc.
	CO4: To draw polar plots of s and p orbitals.
	CO5: Purification of organic compounds by crystallization (from water and alcohol), distillation (Two Compounds), Sublimation, (micro technique).
	CO6: Semicarbazone derivatives of aldehydes and ketones. Oxime and 2, 4-dinitrophenylhydrazone of aldehyde ketone.

S. Y. B. Sc. Course Outcome
SEMESTER-III

	Course Outcome
CH-301: Physical and Analytical Chemistry	**CO1:** Define / Explain concept of kinetics, terms used, rate laws, molecularity, and order. Explain factors affecting rate of reaction Explain / discuss / derive integrated rate laws, characteristics, expression for half-life and examples of zero order, first order, and second order reactions. Determination of order of reaction by integrated rate equation method, graphical method, half-life method and differential method. Explain / discuss the term energy of activation with the help of energy diagram. Explanation for temperature coefficient and effect of temperature on rate constant k. Derivation of Arrhenius equation and evaluation of energy of activation graphically. Derivations of collision theory and transition state theory of bimolecular reaction and comparison. Solve / discuss the problem based applying theory and equations.
	CO2: Define explain adsorption, classification of given processes into physical and chemical adsorption. Discuss factors influencing adsorption, its characteristics, differentiates types as physisorption and Chemisorption. Classification of Adsorption Isotherms, to derive isotherms. Explanation of adsorption results in the light of Langmuir adsorption isotherm, Freundlich's adsorption Isotherm and BET theory. Apply adsorption process to real life problem. Solve / discuss problems using theory.
	CO3: Define, explain and compare meaning of accuracy and precision Apply the methods of expressing the errors in analysis from results Explain / discuss different terms related to errors in quantitative analysis. Apply statistical methods to express his / her analytical results in laboratory. Solve problems applying equations.
	CO4: Explain / define different terms in volumetric analysis such as units of concentration, indicator, equivalence point, end point, standard solutions, primary and secondary standards, complexing agent, precipitating agent, oxidizing agent, reducing agent, redox indicators, acid base indicators, metallochome indicators, etc. Perform calculations involved in volumetric analysis. Explain why indicator show colour change and pH range of colour change. To prepare standard solution and b. perform standardization of solutions. To construct acid – base titration curves and performs choice of indicator for particular titration. Explain / discuss acid-base titrations, complexometric titration / precipitation titration /redox titration Apply volumetric methods of analysis to real problem in analytical chemistry / industry.
CH-302: Inorganic and Organic Chemistry	**CO1:** Define terms related to molecular orbital theory (AO, MO, sigma bond, pi bond, bond order, magnetic property of molecules, etc). Explain and apply LCAO principle for the formation of MO's from AO's. Explain formation of different types of MO's from AO's. Distinguish between atomic and molecular orbitals, bonding, anti-bonding and nonbonding molecular orbitals. Draw and explain MO energy level diagrams for homo and hetero diatomic molecules. Explain bond order and magnetic property of molecule Explain formation and stability of molecule on the basis of bond order. Apply

	MOT to explain bonding in diatomic molecules other than ex... in syllabus.
	CO2: Define different terms related to the coordination chemistry (double salt, coordination compounds, coordinate bond, ligand, central metal ion, complex ion, coordination number, magnetic moment, crystal field stabilization energy, types of ligand, chelate effect, etc.) Explain Werner's theory of coordination compounds. Differentiate between primary and secondary valency. Correlate coordination number and structure of complex ion. Apply IUPAC nomenclature to coordination compound.
	CO3: Identify and draw the structures aromatic hydrocarbons from their names or from structure name can be assigned. Explain / discuss synthesis of aromatic hydrocarbons. Give the mechanism of reactions involved. Explain /Discuss important reactions of aromatic hydrocarbon. To correlate reagent and reactions.
	CO4: Identify and draw the structures alkyl / aryl halides from their names or from structure name can be assigned. Explain / discuss synthesis of alkyl / aryl halides. Write / discuss the mechanism of Nucleophilic Substitution (SN1, SN2 and SNi) reactions. Explain /Discuss important reactions of alkyl / aryl halides. To correlate reagent and reactions. Give synthesis of expected alkyl / aryl halides.
	CO5: After studying the Alcohols and Phenols student will able to- Identify and draw the structures alcohols / phenols from their names or from structure name can be assigned. Able to differentiate between alcohols and phenols. Explain / discuss synthesis of alcohols / phenols. Write / discuss the mechanism of various reactions involved. Explain /Discuss important reactions of alcohols / phenols. To correlate reagent and reactions of alcohols / phenols Give synthesis of expected alcohols / phenols.
Lab Course: CH-303: Practical Chemistry-III	**CO1:** Verify theoretical principles experimentally.
	CO2: Interpret the experimental data on the basis of theoretical principles.
	CO3: Correlate theory to experiments. Understand/verify theoretical principles by experiment observations: explain practical output / data with the help of theory.
	CO4: Understand systematic methods of identification of substance by chemical methods.
	CO5: Write balanced equation for the chemical reactions performed in the laboratory.
	CO6: Perform organic and inorganic synthesis and is able to follow the progress of the chemical reaction by suitable method (colour change, ppt. formation, TLC).
	CO7: Set up the apparatus / prepare the solutions - properly for the designed experiments.
	CO8: Perform the quantitative chemical analysis of substances explain principles behind it.
	CO9: Systematic working skill in laboratory will be imparted in student.

S. Y. B. Sc. Course Outcome
SEMESTER-IV

CH-401: Physical and Analytical Chemistry	Course Outcome
	CO1: After studying the Phase equilibrium student will able to- Define the terms in phase equilibria such as- system, phase in system, components in system, degree of freedom, one / two component system, phase rule, etc. Explain meaning and Types of equilibrium such as true or static, metastable and unstable equilibrium. Discuss meaning of phase, component and degree of freedom. Derive of phase rule. Explain of one component system with respect to: Description of the curve, Phase rule relationship and typical features for i) Water system ii) Carbon dioxide system iii) Sulphur system.
	CO2: After studying the Ideal and real solutions student will able to- Define various terms, laws; differentiate ideal and no-ideal solutions. Discuss / explain thermodynamic aspects of Ideal solutions-Gibbs free energy change, Volume change, Enthalpy change and entropy change of mixing of Ideal solution. Differentiate between ideal and non-ideal solutions and can apply Raoult's law. Interpretation of i) vapour pressure–composition diagram ii) temperature- composition diagram. Explain distillation of liquid solutions from temperature – composition diagram. Explain / discuss azeotropes, Lever rule, Henrys law and its application. Discuss / explain solubility of partially miscible liquids-systems with upper critical. Solution temperature, lower critical solution temperature and having both UCST and LCST. Explain / discuss concept of distribution of solute amongst pair of immiscible solvents. Derive distribution law and its thermodynamic proof. Apply solvent extraction to separate the components of from mixture interest. Solve problem by applying theory.
	CO3: After studying the Conductometry student will able to- Explain/ define different terms in conductometry such as electrolytic conductance, resistance, conductance, Ohm's law, cell constant, specific and equivalent conductance, molar conductance, Kohlrausch's law, etc. Discuss/ explain Kohlrausch's law and its Applications, Conductivity Cell, Conductivity Meter, Whetstone Bridge. Explain/ discuss conductometric titrations. Apply conductometric methods of analysis to real problem in analytical laboratory. Solve problems based on theory/ equations. Correlate different terms with each other and derive equations for their correlations.
	CO4: After studying the Colorimetry student will able to- Explain / define different terms in Colorimetry such as radiant power, transmittance, absorbance, molar, Lamberts Law, Beer's Law, molar absorptivity. Discuss/ explain/ derive Beer's law of absorptivity. Explain construction and working of colorimeter. Apply colorimetric methods of analysis to real problem in analytical laboratory. Solve problems based on theory / equations. Correlate different terms with each other and derive equations for their correlations.
	CO5: After studying the Chromatography student will able to- Explain/ define different terms in column chromatography such as stationary phase, mobile phase, elution, adsorption, ion exchange

	resin, adsorbate, etc. Explain properties of adsorbents, ion exchange resins, etc. Discuss explain separation of ionic substances using resins. Discuss explain separation of substances using silica gel/ alumina. Apply column chromatographic process for real analysis in analytical laboratory.
CH-402: Inorganic and Organic Chemistry	CO1: After studying the Isomerism in coordination complexes student will able to- Isomerism in coordination complexes 2. Explain different types of isomerism in coordination complexes.
	CO2: After studying the Valance Bond Theory of Coordination Compounds student will able to- Apply principles of VBT to explain bonding in coordination compound of different geometries. 2. Correlate no of unpaired electrons and orbitals used for bonding. 2. Identify / explain / discuss inner and outer orbital complexes. 4. Explain / discuss limitation of VBT.
	CO3: After studying the Crystal Field Theory student will able to- Explain principle of CFT. Apply crystal field theory to different type of complexes. Explain: i) strong field and weak field ligand approach in Oh complexes ii) Magnetic properties of coordination compounds on the basis of weak and strong ligand field ligand concept. iii) Origin of colour of coordination complex. Calculate field stabilization energy and magnetic moment for various complexes. To identify Td and Sq. Pl complexes on the basis of magnetic properties/ unpaired electrons. Explain spectrochemical series, tetragonal distortion / Jahn-Teller effect in Cu(II) OH complexes only.
	CO4: After studying the Aldehydes and Ketones student will able to- Identify and draw the structures aldehydes and ketones from theirnames or from structure name can be assigned. Explain / discusssynthesis of aldehydes and ketones. Write / discuss the mechanismreactions aldehydes and ketones. Explain /Discuss important reactionsof aldehydes and ketones. To correlate reagent and reactions of aldehydes and ketones. Give synthesis of expected aldehydes and ketones. Perform inter conversion of functional groups.
	CO5: After studying the Carboxylic acids and their derivatives student will able to- Identify and draw the structures carboxylic acids and their derivatives from their names or from structure name can be assigned. Explain / discuss synthesis of carboxylic acids and their derivatives. Write / discuss the mechanism reactions carboxylic acids and their derivatives. Explain Discuss important reactions of carboxylic acids and their derivatives. Correlate reagent and reactions of carboxylic acids and their derivatives. Give synthesis of expected carboxylic acids and their derivatives. Perform inter conversion of functional groups.
	CO6: After studying the Amines and Diazonium Salts student will able to- Identify and draw the structures amines from their names or from structure name can be assigned. Explain discuss synthesis of carboxylic amines. Write discuss the mechanism reactions carboxylic amines. Explain Discuss important reactions of carboxylic amines. To correlate reagent and reactions of carboxylic amines. Give synthesis diazonium salt from amines and reactions of diazonium salt. Perform

CO7 [illegible] functional groups

[illegible] Stereochemistry of Cyclohexane student will be able to [illegible] different conformations of cyclohexane. Define [illegible] hydrogen, equatorial hydrogen, conformation, [illegible] etc. Convert one conformation of [illegible] another conformation and should able to identify [illegible] Explain [illegible] stability with respect to [illegible] different conformations of cyclohexane. Draw [illegible] different conformations of methyl, t-butyl [illegible] equatorial and 1,3 dimethyl [illegible] and trans isomers of 1,3 dimethyl [illegible] and able to compare their stability.

Lab Course CH-403: Practical Chemistry-IV

CO1 [illegible] principles experimentally

CO2 [illegible] on the basis of theoretical principles

CO3 [illegible] the experiments. Understand [illegible] theoretical principles [illegible] experiment. Explain practical output with the help of [illegible]

CO4 [illegible] methods of identification of substance by [illegible] methods

CO5 [illegible] for all the chemical reactions performed in the [illegible]

CO6 [illegible] and organic synthesis and able to follow the [illegible] chemical reaction

CO7 [illegible] the designed experiments

CO8 [illegible] chemical analysis of substances and able to [illegible] behind it.

T. Y. B. Sc. Course Outcome
SEMESTER V

DSEC-I: CH-501: (Discipline Specific Elective course: Physical Chemistry-I

Course Outcome

CO1 [illegible] completion of Quantum Chemistry, students will be [illegible] development of quantum mechanics in [illegible] and explain the differences between classical [illegible] understand the idea of wave function [illegible] hypothesis and the uncertainty principle [illegible] momentum and energy. Solving [illegible] for 1D, 2D and 3D model. Physical [illegible] and sketching the wave function [illegible] students zero point energy and quantum [illegible]

	CO2: After studying Investigation of Molecular structure, the student will be able to: Understand the term additive and constitutive properties. Understand the term specific volume, molar volume and molar refraction. Understand the meaning of electrical polarization of molecule, induced and orientation polarization. Dipole moment and its experimental determination by temperature variation method. Electromagnetic spectrum, Nature of wave and its characteristics such as wavelength, wave number, frequency and velocity, Energy level diagram, Classification of molecules on the basis of moment of Inertia. Rotational spectra of rigid diatomic molecules, selection rules, nature of spectral lines. Simple Harmonic oscillator model, Born-Oppenheimer approximation. Vibrational spectra of diatomic molecules selection rules, nature of spectral lines. Explain the difference between Rayleigh, Stokes and anti-Stokes lines in a Raman spectrum. Justify the difference in intensity between Stokes and anti- Stokes lines. Draw the Stokes and anti-Stokes lines in a Raman spectrum. Raman spectra: Concept of polarizabilit. Pure rotational Raman spectra of diatomic molecules, Energy Expression, Selection rule. Rotational energy level diagram. Rotational Raman spectrum and Problems.
	CO3: After studying Photochemistry, the student will be able to know and understand: Difference between thermal and photochemical processes. Photochemical laws: Grothus - Draper law, Stark-Einstein law. Quantum yield and reasons for high and low quantum yield, factors effecting the quantum yield. Experimental method for the determination of quantum yield. Photochemical reactions: photosynthesis, photolysis, photocatalysis, photosensitization. Various photochemical phenomena like fluorescence, phosphorescence, Chemiluminescence and Problems.
DSEC-I: CH-502: Analytical Chemistry-I	CO1: After completion of the Gravimetry, Inorganic Qualitative Analysis, Thermal methods of analysis, Parameters of instrumental analysis,UV-Visible spectroscopy, student should be able to- Define basic terms in gravimetry, spectrophotometry, qualitative analysis and parameters in instrumental analysis. Such as: Gravimetry, precipitation, solubility product, ionic product, common ion effect, precipitating agent, washing of ppt., drying and ignition of ppt., linearity range, detection limit, precision, accuracy, Sensitivity, Selectivity, Robustness and Ruggedness, electromagnetic radiations, spectrophotometry, Beers law, absorbance, transmittance, molar absorptivity, monochromator, wavelength of maximum absorbance, metal ligand ration, qualitative analysis, group reagent, dry tests, wet test, confirmatory test, precipitation, thermogravimetry, thermogram, percent wt. loss, differential thermal analysis, etc.
	CO2: Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration in particular analysis (gravimetry, spectrophotometry, thermogravimetry), reagent for particular analysis, reaction condition to convert analyte into measurable form, drying and ignition temperature for ppt in gravimetry, heating rate thermogravimetry, wavelength in spectrophotometry, group reagent, removal borate and phosphate in qualitative analysis, etc.
	CO3: Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis.

	CO4: Perform quantitative calculations depending upon equations studied in the theory. Furthermore, student should able to solve problems on the basis of theory.
	CO5: Develop/ Describe procedure for different types analyses included in the syllabus. Select particular method of analysis if analyte sample is given to him. Differentiate/ distinguish/ Compare among the different analytical terms, process and analytical methods.
	CO6: Demonstrate theoretical principles with help of practical. Design analytical procedure for given sample.
	CO7: Apply whatever theoretical principles he has studied in theory during practical session in laboratory.
Lab Course: DSEC-I: CH-503: Physical Chemistry Practical-I	CO1: After successfully completion of Refractometry, students will be able to: Determine the specific refractivity's of the given liquids A and B and then mixture and hence determine the percentage composition of mixture C. To determine the molecular refractivity of the given liquids A, B, C and D.
	CO2: After successfully completion of Spectrophotometry and Colorimetry, students will be able to: titrate Cu^{++} ions with EDTA photometrically. Estimate of Fe^{+++} ions by thiocyanate method. Cobalt by using R-salt method.
	CO3: After successfully completion of Conductometry, students will be able to: Titration of a mixture of weak acid and strong acid with strong alkali. Determine the velocity constant of hydrolysis of ethyl acetate by NaOH solution by conductometric method. To determine the acidity of citric acid in given fruit by titrating it against standard NaOH solution by conductometric method. To determine λ_{∞} of strong electrolyte (NaCl or KCl) and to verify Onsager equation.
	CO4: After successfully completion of Viscosity, students will be able to: Determine the molecular weight of a high polymer by using solutions of different concentrations.
DSEC-II: CH-504:	CO1: After successfully completion of Molecular Orbital Theory of Coordination Compounds, students will be able to: Explain electroneutrality principle and different types of pi bonding.
Inorganic Chemistry-I	Explain Nephelauxetic effect towards covalent bonding. Explain MOT of Octahedral complexes with sigma bonding. Explain Charge Transfer Spectra. Compare the different approaches to bonding in Coordination compounds.
	CO2: After successfully completion of Inorganic Reaction Mechanism, students will be able to: Understand about inert and labile complexes and stability of complexes in aqueous solutions. Classification of reactions of coordination compounds. The basic mechanisms of ligand substitution reactions. Substitution reactions of square planer complexes. Tran's effect and applications of Trans effect. Stereochemistry of mechanism. Use the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems.

	CO3: After successfully completion of Chemistry of Transition elements, students will be able to: Know position of d-block elements in periodic table. To know the general electronic configuration & electronic configuration of elements. To know trends in periodic properties of these elements w. r. to size of atom and ions, reactivity, catalytic activity, oxidation state, complex formation ability, color, magnetic properties, non-stoichiometry, density, melting point, boiling point.
	CO4: After successfully completion of Chemistry of f-block elements, students will be able to: The meaning of term f-block elements, Inner transition elements, lanthanides, actinides, Electronic configuration of lanthanides and actinides, Oxidation states of lanthanides and actinides and common oxidation states, Separation lanthanides by modern methods, Lanthanide contraction and effects of lanthanide contraction on post-lanthanides, Use of lanthanide elements in different industries, Transuranic elements, Preparation methods of transuranic elements, Nuclear fuels and their applications, Why transuranic elements are called as the synthetic elements? IUPAC nomenclature for super heavy elements with atomic no. 100 onwards.
	CO5: After successfully completion of Metals, Semiconductors and Superconductors, students will be able to: The meaning of metal & semiconductor, The difference between metal, semiconductor and insulator, Metallic bond on the basis of band theory, The energy band and energy curve, Draw n (E) & N (E) curves, Explain the electrical conductivity of metals with respect to valence electrons, Explain the effect of temperature and impurity on conductivity of metals and semiconductors, Intrinsic and extrinsic semiconductor, The term valence band and conduction band, n and p type of semiconductors, Non-stoichiometry and semi conductivity, Insulators on the basis of band theory, The difference between Na, Mg, and Al in terms of valence electrons and conductivity, Meaning of super conductors and their structure, Discovery and applications of superconductors.
DSEC-II: CH-505: Industrial Chemistry-I	CO1: After successfully completion of Modern Approach to Chemical Industry, students will be able to: Importance of chemical industry, Meaning of the terms involved, Comparison between batch and continuous process, Knowledge of various industrial aspects.
	CO2: After successfully completion of Manufacture of Basic Chemicals, students will be able to: Concept of basic chemicals, Their uses and manufacturing process, They should also know the physico-chemical principals involved in manufacturing process.
	CO3: After successfully completion of Sugar and Fermentation Industry, students will be able to: Importance of sugar industry, Manufacture of direct, Consumption information white) sugar with flow diagram, Cane juice extraction by various methods, Clarification by processes like carbonation, Sulphitation, Phosphatation etc, Concentration of juice by using multiple effect evaporator system, Crystallization of sucrose by using

	...cuum pan. Basic requirement of fermentation process. ...nufacturing of ethyl alcohol by using molasses and fruit ...
	CO4: After successfully completion of Chemistry of Soap and detergents, students will be able to: Different types of soap products. Chemistry of soap. Raw materials required for soap manufacture. Meaning of the term's Surfactants. Types of surfactants. Raw materials for detergents. Detergent builders. ...itives. Washing action of soap and detergents.
	CO5: After successfully completion of Dyes and Pigments, students will be able to: Dyes: Introduction, Dye intermediates, Structural features of a dye; ...ssification of dyes. Synthesis, Structures, properties and ...lications of dyes. Pigments: Introduction, Classification and ...eral properties of pigment. Production processes of zinc oxide and ... oxide.
DSEC-II: CH-506: Inorganic Chemistry Practical-I	CO1: After successfully completion of Gravimetric estimations, students will be able to: ...vimetric estimation of Fe as Fe2O3. Gravimetric estimation of Ba as BaSO4 using homogeneous precipitation method. Gravimetric ...mation of Nickel as Ni DMG.
	CO2: After successfully completion of Inorganic preparations, students will be able to: Preparation of inorganic complexes and spot tests for metal ions and ...nds: Preparation of hexamminenickel (II) chloride, [Ni ...H3)6] 2. Preparation of Potassium trioxalatoferrate (III). K3 [Fe ...O)3].Preparation of Manganese (III) acetylacetonate, [Mn ...e)3].
	CO3: After successfully completion of 6 mixtures of Inorganic Qualitative ...lysis, students will be able to: ...nit test for iron, chloride and sulphate from pharmaceutical raw ...erials. Qualitative and confirmatory tests of inorganic toxicants of ... four ions (Borate, copper, hypochlorite or nitrate or nitrite, Sb or ... Iodate, H2O2)
DSEC-III: CH-507: Organic Chemistry - I	CO1: After successfully completion of Polynuclear and Heteronuclear ...matic Compounds, students will be able to: ...fine and classify polynuclear and hetreonuclear aromatic ...rocarbons. Write the structure, synthesis of polynuclear and ...reonuclear aromatic hydrocarbons. Understand the reactions and ...hanisms. Explain the reactivity of polynuclear and hetreonuclear ...matic hydrocarbons. Describe the synthesis of chemical reactions

	...olynuclear and hetreonuclear aromatic Hydrocarbons.
	CO2: After successfully completion of Active Methylene Compounds, students should be able to understand: ...ning of active methylene group. Reactivity of methylene group. ...hetic applications ethyl acetoacetate and malonic ester. To predict ...duct with planning or supply the reagent/s for these reactions

	CO3: After successfully completion of Molecular Rearrangement, Students will study, What is rearrangement reaction? Different types of intermediate in rearrangement reactions? To write the mechanism of some named rearrangement reactions and their applications. Electrocyclic rearrangement with their mechanisms.
	CO4: After successfully completion of Elimination Reactions; Students should be familiar with 1, 1 and 1, 2 elimination. E1, E2 and E1cB mechanism with evidences of these reactions. Understand stereochemistry by using models and learn reactivity of geometrical isomers. Orientation and reactivity in E1 and E2 elimination. Hofmann and Saytzeff's Orientation. Effect of factors on the rate of elimination reactions.
DSEC-III: CH-508: Chemistry of Biomolecules	CO1: After successfully completion of Introduction to molecular logic of life. The student will understand of Cell types. Difference between a bacterial cell, Plant cell and animal cell. Biological composition and organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules. Bonds that link monomeric units to form macromolecules.
	CO2: After successfully completion of Carbohydrates, the student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates.
	CO3: After successfully completion of Lipids, Students will study the types of lipids with examples, structure of lipids, properties of lipids.
	CO4: After successfully completion of Amino acids and proteins; Students should be familiar with the structure and types of amino acids. Reactions of amino acids. Properties of amino acids. Peptide bond formation. Types of proteins. Structural features in proteins. Effect of 3D structure of amino acid. Determination of N and C terminus of the side chain.
	CO5: After successfully completion of Enzymes; the student should be understand the classes of enzymes with subclasses and examples. Enzyme specificity. Equations of enzyme kinetics Km and its significance, features of various types of enzyme inhibitions, industrial applications of enzymes.
	CO6: After successfully completion of Hormones; the student should be understand basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones.
DSEC-III: CH-509: Organic Chemistry	CO1: After successfully completion of Separation of Binary Mixtures and Qualitative Analysis, the students will be able to perform the qualitative chemical analysis of binary mixture, explain principles involved it. Separate, purify and analyse binary water insoluble mixture.

Practical-I		Separate, purify and analyse binary water-soluble mixture. Understand techniques involving drying and recrystallization by various method. Familiarize the test involving identification of special elements. Learn the confirmatory test for various functional groups.
	CO2:	After successfully completion of Preparations, the students will be able to Systematic working skill in laboratory. Learn the basic principles of green and sustainable chemistry. Synthesis of various organic compounds through greener approach. Do and understand Stoichiometric calculations and relate them to green process metrics. Learn alternative solvent media and energy sources for chemical processes.
	CO3:	After successfully completion of the preparations of derivative, the students will be able to understand the techniques involving drying and recrystallization by various method. Expertise the various techniques of preparation and analysis of organic substances. Understand principle of Thin Layer Chromatographic techniques. Understand the purification technique used in organic chemistry.
SEC-I: CH-510 (B) : Polymer Chemistry: Skills EnhancingCourse-I	CO1:	After successfully completion of the Course Polymer Chemistry, the students will be able to learn the following aspects: History of polymers. Difference between simple compounds and polymer. Classes of polymers.
	CO2:	Various ways of nomenclature. Difference between natural, synthetic, organic and inorganic polymers.
	CO3:	Terms- Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight.
	CO4:	Mechanisms of polymerization. Polymerization techniques. Uses & properties of polymers.
	CO5:	Role of polymer industry in the economy. Advantages of polymers.
SEC-II: CH-511 (A) : Environmental Chemistry: Skills EnhancingCourse-II	CO1:	After successfully completion of Concepts and scope ofEnvironmental Chemistry, the students will be able to learn Environmental Pollution Classification. Units of concentration. Components of Environment. Biogeochemical cycles of C, N, P, S and O with.
	CO2:	After successfully completion of Hydrosphere and Water Pollution, the students will be able to Water resources. Hydrological Cycle. Organic and inorganic pollutants. Water quality parameters.
	CO3:	After successfully completion of Analytical Techniques in water analysis, the students will be able to understand water quality parameters and standards. domestic water quality parameters, surface water sampling, preservation. Monitoring techniques and methodology (pH, conductance, DO, ammonia, nitrate and nitrite, Cl, F, Sulfide, sulphate, phosphate, total hardness, Boron, metals and metalloids- As, Cd, Cr, Cu, Fe, Pb, Mn, Hg, COD, BOD, TOC, Phenols, pesticides, surfactants, tannis and lignins, E. Coli, Case studies of water pollution.
	CO4:	After successfully completion of Water pollution and treatment methods, the students will be able to understand water pollutants, their classification. Waste water treatment (domestic waste water, aerobic treatment, anaerobic treatment, up flow anaerobic sludge bed, industrial water treatment, drinking water supply

Principal
M. G. Vidyamandir's
Art's, Science & Commerce College
Harsul, Tal.Tryambakeshwar Dist.Nashik