



**AP STATE COUNCIL OF HIGHER EDUCATION**

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**STANDARD OPERATING PROCEDURES  
FOR STARTING THE 4TH YEAR OF  
4-YEAR HONOURS DEGREE  
PROGRAMMES**

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# Standard Operating Procedure for the implementation of 4-year Honours Degree Programmes

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## I. Preamble

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The National Education Policy (NEP) 2020 recognizes that higher education plays an extremely important role in promoting human as well as societal well-being and in developing India as envisioned in its Constitution - a democratic, just, socially conscious, cultured, and humane nation upholding liberty, equality, fraternity, and justice for all. It notes that *“given the 21st - century requirements, quality higher education must aim to develop good, thoughtful, well-rounded, and creative individuals”*.

Further, it also recommends *that “the undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a UG certificate after completing 1 year in a discipline or field including vocational and professional areas, or a UG diploma after 2 years of study, or a Bachelor’s degree after a 3-year programme. The 4-year multidisciplinary Bachelor’s programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student”*.

Accordingly, the Government of Andhra Pradesh vide G.O. Ms. No 46 Dt.22.12.2020 Higher Education (CE) Department has introduced a 4-year Honours Programme in all University Colleges and its affiliated colleges from the academic year 2020-21. This is in alignment with the recommendations of NEP 2020 to have a **4-year Undergraduate Degree (Honours)** and **4-year UG Degree Honours with Research**.

The AP State Council of Higher Education has developed the curricular framework for both the Honours programmes incorporating a flexible choice-based credit system, multidisciplinary approach, with specialisation in a single major in the 4<sup>th</sup> year of study, skill orientation and 10-month mandatory internships.

In accordance, the AP State Council of Higher Education has rolled out the Standard Operating Procedures for the 4<sup>th</sup> year of 4-year UG Degree (Honours)

and 4-year UG Degree (Honours with Research). This Standard Operating Procedure is to provide detailed instructions on how to implement the 4<sup>th</sup> year of 4-year Degree Programmes by Colleges and Universities and enable the students to make right choices and facilitate them to pursue their career path by choosing the subject/field of their interest.

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## ***II. 4-Year Honours Degree Programme***

***– Grapnel with NEP 2020***

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National Education Policy 2020 envisages transformational initiatives like –

- Undergraduate degree programmes of either 3 or 4-year duration, with multiple entry and exit points and re-entry options, with appropriate certifications such as
  - a UG certificate after completing 1-year (2 semesters) of study in the fields of study.
  - a UG diploma after 2 years (4 semesters) of study.
  - a Bachelor's degree after a 3-year (6 semesters) programme of study.
  - a 4-year Bachelor degree (Honours) after eight semesters programme of study.
  - If the student completes a rigorous research project in their major area of study in the 4<sup>th</sup> year of a Bachelor degree (Honours with research)
- The 4-year Bachelor's degree is considered a preferred option since it would provide the opportunity to experience the full range of holistic and multidisciplinary education in addition to focus on the chosen major as per the choice of the student.

Hence, anchoring with the NEP 2020, the AP State Council of Higher Education has rolled out the 4-year UG Honours and 4-year UG Honours with Research programmes of study.

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### ***III. Metamorphic Initiatives in the 4-year UG Degree Programmes***

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The 4-year UG Degree programmes is a shift with metamorphic changes from the conventional 3-year degree programme.

The curriculum framework for 4-year UG Degree Programs has the following outstanding features -

1. Multidisciplinary in nature with the choice of three subjects in the first three years.
2. Flexibility to choose any one of the three subjects in the 4<sup>th</sup> year of study as major.
3. Credit-based courses with well-defined learning outcomes, ensuring outcome-based education.
4. Courses on Life Skills with flexibility of choice in choosing the courses.
5. Skill Development Courses (SDCs) to acquire multidisciplinary skills. Choice is given to the students to choose the courses in different domains, arts or commerce or science.
6. Skill Enhancement Courses (SECs) to ensure skills required for the future world of work in the specific domain areas of study. Flexibility in choosing the courses is given to the students by offering multiple courses.
7. Introduced Compulsory Community Service Project (4 credits) during a Summer Term (in the intervening summer vacation between 1<sup>st</sup> and 2<sup>nd</sup> years of study) to carry out with the objective of inculcating conscience and compassionate commitment towards the society coupled with a sense of belongingness to the community.
8. A short-term internship/apprenticeship/on the job training (4 credits) with the objectives of integrating theory and practice and to build a record of work experience. It is carried out in the summer term during summer vacation (in the intervening summer vacation between 2<sup>nd</sup> and 3<sup>rd</sup> years of study)

9. A full-semester internship/apprenticeship/on the job training (12 credits) with the objective of acquiring additional skills required for the world of work and to explore career alternatives prior to graduation.
10. For the 4<sup>th</sup> year of study for 4-year Degree with Honours
- to acquire an Honours Degree the student can pursue
  - courses in any major from among the three majors studied in the first three years of study. This enables to acquire an in-depth knowledge in one of the subject areas.
  - Included courses of Higher order and Skill oriented courses.
  - Two mandatory online transdisciplinary courses
  - Student can choose 40% of the regular courses to do in online mode.
11. For the 4<sup>th</sup> year of study for 4-year Degree Honours with Research
- to acquire an Honours Degree with Research, the student shall do 5 research methodology courses.
  - 3 of the 5 research methodology courses are common for all the disciplines, Arts and Humanities, Sciences and Commerce.
  - 2 of the 5-research methodology courses are domain specific.
  - Two mandatory online transdisciplinary courses.
  - One individual research project in the chosen specialisation.

## IV. Curricular Framework

### 4-Year UG B.Sc Degree with Honours

<b>CBCS CURRICULAR FRAMEWORK 4-YEAR HONOURS PROGRAMME (2020 - 2021 ONWARDS) - B.Sc. (Honours)</b>																	
Subjects	SEM I		SEM II		SEM III		SEM IV		SEM V		SEM VI		SEM VII		SEM VIII		
	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	
<b>Languages</b>																	
English	4	3	4	3	4	3											
Language (H/T/S)	4	3	4	3	4	3											
Life Skill Courses	2	2	2	2	2+2	2+2											
Skill Development Courses	2	2	2+2	2+2	2	2											
Major 1	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1			5	5	5	5	5
Major 2	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1			5	5	5	5	5
Major 3	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1	4+2	4+1			5	5	5	5	5
Major 1							4+2	4+1					5	5	5	5	5
Major 2							4+2	4+1									
Major 3							4+2	4+1									
Major 1									3+3	3-2							
Major 2									3+3	3-2							
Major 3									3+3	3-2							
<b>Hrs/W (Academic Credits)</b>	30	25	32	27	32	27	36	30	36	30	12	4	4	25	29	25	29
Project Work																	
Extension Activities (Non Academic Credits)																	
NCC/NSS/Sports/Extra Curricular								2									
Yoga						1		1									
Extra Credits																	



### 4-Year UG B.A. Degree with Honours

<b>CBCS CURRICULAR FRAMEWORK 4-YEAR HONOURS PROGRAMME (2020 - 2021 ONWARDS) - BA (Honours)</b>																
Subjects	SEM I		SEM II		SEM III		SEM IV		SEM V		SEM VI		SEM VII		SEM VIII	
	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits
<b>Languages</b>																
English	4	3	4	3	4	3										
Language (H/T/S)	4	3	4	3	4	3										
Life Skill Courses	2	2	2	2	2+2	2+2										
Skill Development Courses	2	2	2+2	2+2	2	2										
<b>Core Papers</b>																
Major 1	5	4	5	4	5	4	5	4						5	5	5
Major 2	5	4	5	4	5	4	5	4						5	5	5
Major 3	5	4	5	4	5	4	5	4						5	5	5
Major 1							5	4						5	5	5
Major 2							5	4						5	5	5
Major 3							5	4						5	5	5
Major 1									5	4						
Major 2									5	4						
Major 3									5	4						
Major 1									5	4						
Major 2									5	4						
Major 3									5	4						
<b>Hrs/W (Academic Credits)</b>	27	22	29	24	29	24	30	24	35	24	0	12	4	4	4	24
Project Work																
NCC/NSS/Sports/Extra Curricular								2								
Yoga						1		1								
Extra Credits																
<b>Hrs/W (Total Credits)</b>	27	22	29	24	29	25	30	27	35	24	0	12	4	4	4	29
																25
																25
																29
																24









## *Policies and Practices in the Curricular Framework*

### *- 4-Year Degree with Honours*

#### *4th year of the 4-year UG with Honours*

1. 4<sup>th</sup> year shall have two semesters Sem VII and Sem VIII.
2. Semesters VII and VIII shall have 6 courses each. A total of 12 courses for the 4<sup>th</sup> year.
3. Of the 6 courses in each of Semesters VII and VIII, 5 courses are Subject specific and 1 course shall mandatorily be OPEN Online course in any discipline, encouraging transdisciplinary learning.
4. A student who has completed three-year degree program with three majors shall choose to continue the 4<sup>th</sup> year in any one of the three majors
5. Three of the five Subject related courses in Sem VII shall be of higher order knowledge. And two of the five courses in Sem VII shall be skill oriented. Similarly, three of the five courses in Sem VIII shall be of higher order knowledge and two of the five courses in Sem VIII shall be skill oriented. Thus, of the ten Subject related courses in 4<sup>th</sup> year, a student shall study six courses of higher order knowledge and four courses which are skill oriented.

<b>Year</b>	<b>Semester</b>	<b>Course Code</b>	<b>Type of Course</b>	<b>Hrs/Week</b>	<b>Credits</b>
4	VII	VII.1.8	Higher Order	5	5
4	VII	VII.2.9	Higher Order	5	5
4	VII	VII.3.10	Higher Order	5	5
4	VII	VII.4.11	Skill Oriented	5	5
4	VII	VII.5.12	Skill Oriented	5	5
4	VII	VII.6.13	Transdisciplinary Online Course	15 Weeks	4
4	VIII	VIII.1.14	Higher Order	5	5
4	VIII	VIII.2.15	Higher Order	5	5
4	VIII	VIII.3.16	Higher Order	5	5
4	VIII	VIII.4.17	Skill Oriented	5	5
4	VIII	VIII.5.18	Skill Oriented	5	5
4	VIII	VIII.6.19	Transdisciplinary Online Course	15 Weeks	4

**For B. Com 4<sup>th</sup> year of 4-year Honours Program:**

The following four specializations are offered for B.Com Honours

- Finance & Accounting
- Marketing Management & Human Resources Management
- E-Commerce & Retail Management
- Logistics & Supply Chain Management

A student shall choose any one of the four specializations for Semester VII and continue with the same specialization in Semester VIII also.

Choice is provided for the students in choosing the courses in each of the specialization.

Two Transdisciplinary Online Courses are to be completed one in Semester VII and another in Semester VIII

**B.Com Computer Applications:**

- For B.Com Computer Applications, the 4<sup>th</sup> year shall contain courses on Computer Applications only.
- In case of B.Com Computers/B.Com with Computers/Computer Applications, the nomenclature shall be common across all Universities. The common nomenclature shall be B.Com (Computer Applications).
- If the Computer Applications courses are inclusive of practical, the workload shall be 3 hours of Theory and 2 hours of practical with a total workload of 5 hours with 5 credits (without apportioning of credits between theory and practical).
- The assessment for practical shall be internal, marks obtained shall be posted against the internal marks.
- Semester end evaluation of courses with practical shall be theory based and for the same number of marks, as assigned to the other Commerce papers.

**Open Online Courses:**

6. For the mandatory OPEN Online Course, the duration shall be a minimum of 15 weeks or 60 hours.
7. Choice shall also be given to a student to complete 4 out of 10 Subject related courses ONLINE. These online courses shall be approved by the University and APSCHE. No approval is necessary for courses selected from SWAYAM or NPTEL. However, the online courses shall have at least 80% of the content matching the syllabus prescribed for that course. For example, a student of Zoology has a course in Embryology offered in VII or VIII Sem, he/she can opt to do the course in

Embryology, online either offered on UGC Consortium for Educational Communication (UGC - CEC) or SWAYAM without the approval of university or any other online service provider, with an approval of the University and APSCHE. Every year, a dynamic list of approved Online courses shall be made available for students by the University and APSCHE. For earning 4 credits for an online course, students shall have a choice of choosing any number of online courses with different credits so as to fulfil the requirement of a total of 4 credits. For ex., a student can either do two online courses of 2 credits each or one course of 4 credits or can acquire a greater number of credits.

8. Choice shall also be given to students to choose any other course, which has not been listed in the courses in the syllabus prescribed by the concerned University.
9. The credits earned through Online learning shall be redeemed for the prescribed credit requirements.
10. The credits and marks acquired by the students online shall be submitted through proper channel to the concerned university in the stipulated period.

**11. Assessment for Online Courses:**

A student has to complete two Open Online Transdisciplinary Courses, in both the 4-year Honours Programs. If the Online Course is done from among the Online courses offered in SWAYAM or UGC MOOCs or NPTEL, the credits and marks awarded shall be recognised and calculated for the SGPA and CGPA. The same shall be the case if any service provider conducts an online examination (proctored). If no online examination is conducted either on SWAYAM or UGC MOOCs or NPTEL or proctored examination by the service provider, a pen and paper examination be conducted by the university.



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## ***V. Policies and Practices in the Curricular Framework***

### ***- 4-year UG Degree Honours with Research***

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#### ***4th year of the 4-year UG Honours with Research***

1. 4<sup>th</sup> year shall have two semesters Sem VII and Sem VIII.
2. For Semester 7, the curricular structure includes 3 common courses on Research Methodologies and 2 discipline specific courses in the 7th semester.
3. In the 8<sup>th</sup> Semester, the student has to complete an individual research project in one of the three subjects of his/her study in the first three years.

#### **4. Courses on Research Methodology (7th Semester):**

The course structure for the 7th Semester shall be as follows:

##### **B.A/B.Com:**

1. Course 7.1 (7th Semester Course 1)

Research Methodology: Conceptual and Theoretical Perspectives

2. Course 7.2

Research Methodology: Observational and Empirical Perspectives

3. Course 7.3

Statistical Analysis using Computer Packages for Research Methodology

4. Course 7.4

Introduction to Social Science Research

5. Course 7.5

Quantitative Approach to Social Science Research

##### **B.Sc (Statistics/Mathematics/Computer Science)**

1. Course 7.1

Research Methodology: Conceptual and Theoretical Perspectives

2. Course 7.2

Research Methodology: Observational and Empirical Perspectives

3. Course 7.3

Statistical Analysis using Computer Packages for Research Methodology

4. Course 7.4

Advanced Statistical Methods for Data Analysis (For Statistics students)

5. Course 7.4

Advanced Areas of Computer Science (For Computer Science students)

6. Course 7.4

Advanced Mathematics for Research (For Mathematics students)

NOTE: For Statistics students, apart from Courses 7.1, 7.2 and 7.3 being mandatory courses, sl no.4 is compulsory and they can opt for sl no.5 or 6 as their 5th Course.

For Computer Science students, apart from Courses 7.1, 7.2 and 7.3 being mandatory courses, sl no.5 is compulsory and they can choose between sl. nos. 4 and 6 as their 5th Course.

In case of Mathematics students, apart from Courses 7.1, 7.2 and 7.3 being mandatory courses, sl no.6 is compulsory and there will be a choice between sl nos. 4 and 5 as their 5th Course.

### **B.Sc (Physical Sciences/Chemical Sciences)**

1. Course 7.1

Research Methodology: Conceptual and Theoretical Perspectives

2. Course 7.2

Research Methodology: Observational and Empirical Perspectives

3. Course 7.3

Statistical Analysis using Computer Packages for Research Methodology

4. Course 7.4

Advanced Analytical Techniques for Science Research

5. Course 7.5

Materials Science

### **B.Sc (Biological Sciences)**

1. Course 7.1

Research Methodology: Conceptual and Theoretical Perspectives

2. Course 7.2

Research Methodology: Observational and Empirical Perspectives

3. Course 7.3

Statistical Analysis using Computer Packages for Research Methodology

4. Course 7.4

Advanced Analytical Techniques for Science Research

5. Course 7.5

Advanced Techniques in Biological Sciences

### **5. Open Online Courses**

A Student shall do TWO Open Online Transdisciplinary Courses, in Semesters 7 & 8. The Online Courses can be of students' choice, either in the same domain/related domain or multidisciplinary in nature. The Online Courses can also be done either in SWAYAM or NPTEL or COURSEERA or from any other resources recognized by the APSCHE and

the competent authority of the respective Universities. The Open Online Courses shall carry 4 Credits each. Students shall have a choice of choosing either two online courses of 2 credits each or one course of 4 credits or can acquire a greater number of credits. If a student desirous of choosing Open Online Courses offered by industry or a recognized online course provider, the duration shall be not less than 60 hours for a 4-credit course.

**Assessment for Online Courses:**

If the Online Course is done from among the Online courses offered in SWAYAM or UGC MOOCs or NPTEL, the credits and marks awarded shall be recognised and calculated for the SGPA and CGPA. The same shall be the case if any service provider conducts an online examination (proctored). If no online examination is conducted either on SWAYAM or UGC MOOCs or NPTEL or proctored examination by the service provider, a pen and paper examination be conducted by the university.

Year	Semester	Course Code	Type of Course	Hrs/Week	Credits
4	VII	VII.1.8	Common Course	5	5
4	VII	VII.2.9	Common Course	5	5
4	VII	VII.3.10	Common Course	5	5
4	VII	VII.4.11	Discipline Specific Course	5	5
4	VII	VII.5.12	Discipline Specific Course	5	5
4	VII	VII.6.13	Transdisciplinary Online Course	15 Weeks	4
4	VIII	VIII.1.14	Research Project in one of the major	15 Weeks	25
4	VIII				
4	VIII				
4	VIII				
4	VIII				
4	VIII	VIII.2.15	Transdisciplinary Online Course	15 Weeks	4

**6. Individual Research Project in Semester 8 for students of Commerce, Arts and Languages:**

Guidelines for the Research Project to be done during 8th Semester

Objectives:

The purpose of this course is to introduce students to the process of conducting social science research projects. The students will be helped to conceptualise, design and execute a research project by a teacher guide.

#### Structure:

Most of the sessions in this semester will be designed in a seminar format. This will be supplemented by individual / group conference / supervision. The focus will be on discussions and analysis of assignments.

Learners will be encouraged to read books and research journals related with his/her research topic and share them in the seminars.

Learners will be initiated to think about research issues throughout the semester, debate these issues with teachers and classmates and synthesise these issues mentally to develop as a researcher.

Being a research degree, this course will entail: (1) a much higher workload than any bachelor's degree course studied so far (2) a heavy dose of readings, and (3) a substantial amount of critical thinking.

#### Duration of the Project:

15 Weeks

#### Method of Assessment:

Continuous Internal Evaluation      100 marks (spread across the semester)  
Semester End External Evaluation shall be conducted at the end of the Semester.

Dissertation      200 marks

Seminar      100 marks

Viva voce      100 marks

There shall be a panel of three Examiners for the Semester End External Evaluation, comprising of Faculty Supervisor, one faculty member-internal examiner and one external examiner.

#### Research Project Work Schedule:

##### Week 1 : Research Seminar

Learners will be helped to select a topic of his/her choice and prepare a paper (3-4 pages) and present it in a seminar organised by the department in the end of the week.

Method of Internal Assessment: Two faculty members (Faculty supervisor and the faculty member who is teaching research methodology papers)

##### Week 2 : Research Proposal

In this week using the learning of previous semester about the research process learners would prepare research proposal.

Learners will select a research problem of his/her choice for this proposal and submit it at end of the week. This proposal will be 5 to 6 pages. It would include (1) research problem and significance, (2) literature review, (3)

theory and hypotheses, (4) research design (5) Sampling (6) tool of data collection (7) data processing and analysis and (8) plan of research report. Learner will be required to present his/her research proposal at the end of the week in a 15-20 minutes in the class room.

Method of Internal Assessment: Two faculty members (Faculty supervisor and the faculty member who is teaching research methodology courses) will assess the proposal.

#### Week 3: Data Collection

In order to collect the requisite data for research study, learners are required to and use the tools of data collection devised / selected during the last semester. Learners are advised to go for pre-testing of tool of data collection selecting 5 to 10 respondents and revise or modify their tool.

#### Week 4: Data Collection

In this week the learners will go to the field and collect data from the respondents selected for the study in the previous semester.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

#### Week 5: Data Processing using SPSS

Once the data are collected, the learners will be helped to process it. They will be required to prepare a Code Book and a Master Chart. This is essential to process the data using SPSS. Learners will be helped to define data, enter data in Data Editor of SPSS.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

#### Week 6: Data Analysis using SPSS

In this week the learners will be helped to prepare a plan of tabulation and execute it. The tabulation plan may include list of independent and dependent variables, univariate tables, bivariate tables, trivariate tables and list of statistical procedures to be applied. Accordingly, the learners will generate Tables and Statistical tests results.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by the learner in data collection.

### Week 7 and Week 8 : Writing of Chapter I : Introduction

The research report starts with the 'Introduction' of the research problem. It introduces the topic or research under investigation and its importance. The introductory chapter gives the background to the specific area of investigation. This is followed by a brief statement of the problem under study. It is also necessary to explain the significance of the present problem. Here researcher is expected to describe precisely and clearly the objective(s) of the research study. This is followed by the statement of the proposed hypotheses of the study that would be tested through statistical procedures.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

### Week 9: Writing of Chapter II : Review of Literature

The next task of the researcher is to present a review of the relevant literature. This includes a critical analysis of earlier research studies. As such, while reviewing literature, it should be kept in mind that literature has been critically examined in terms of agreements and disagreements among the researchers in order to justify the necessity for conducting the research study.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

### Week 10 and Week 11: Writing of Chapter III : Research Methodology

This is followed by a description of the design of a study. This section provides a detailed overview of "how" the study was conducted. The various sub-sections include: i) description of the research design of the study, ii) variables: the independent, dependent and control variables with their operational definitions; iii) sampling procedures : defining the population, and drawing of sample for the present study; iv) listing and describing methods and tools of data collection used in the study, like questionnaires, attitude scales, etc., their reliability, validity and administration etc.; v) describing the statistical procedures used in the analysis of data including the rationale of the use and method of data analysis.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

### Week 12 and Week 13: Writing of Chapter V: Data Analysis and Interpretation

The outcome of the research is presented in tabular form with the help of statistical procedures. The data are analysed and interpreted and presented in the form of research report. If necessary, the findings are also presented

graphically. The figures do not necessarily; repeat the tables, but present data visually for easy understanding and easy comparisons.

Method of Internal Assessment: Faculty supervisor will assess the quality of analysis and interpretation of data.

Week 14 and Week 15: Writing of Chapter VI: Major Findings, Conclusions and Discussions

This is usually the fifth chapter in a research report. The major findings of the study analyzed and interpreted in the preceding chapter are precisely and objectively stated in this chapter. The fourth chapter contains such presentations as only a trained researcher can understand because of the complexities involved; but in the fifth chapter the major findings are presented in a non-technical language so that even non-trained researchers such as a planner or an administrator in the field can make sense out of them.

The major findings are followed by a discussion of the findings. The major findings are compared with the findings of other related research studies which have already been reviewed in the second chapter of the report. Accordingly, the hypotheses formulated in the first chapter are either accepted or rejected. In case the null-hypotheses are rejected, alternative hypotheses are accepted. If the findings do have any discrepancy in comparison with those of other researches, or if the findings do not explain sufficiently the situation or problem under study, or if they are inadequate for generalizations, explanations with proper justification and explanation have to be provided.

Method of Internal Assessment: Faculty supervisor will assess the presentation of major findings, conclusions and discussions and will give grade.

**Though the Research Project is completed in the 8<sup>th</sup> Semester, the work could be initiated in the 7<sup>th</sup> Semester itself.**

## **7. Individual Research Project in Semester 8 for students of Science:**

Guidelines for the Research Project to be done during 8th Semester

Identification of Research Project:

The student has to select a topic which he/she is interested to him/her related to subject which is relevance to the society or industry. The title of the topic can be designed with consultation of the research supervisor.

### Objectives:

The purpose of this course is to introduce students to the process of conducting science research projects. The students will be helped to conceptualise, design and execute a research project by a teacher guide. The students have to identify the objectives related to the topic of the research project proposed.

### Structure:

Most of the sessions in this semester will be designed in a seminar format. This will be supplemented by individual / group conference / supervision. The focus will be on discussions and analysis of assignments.

Learners will be encouraged to read books and research journals related with his/her research topic and share them in the seminars.

Learners will be initiated to think about research issues throughout the semester, debate these issues with teachers and classmates and synthesise these issues mentally to develop as a researcher.

Being a research degree, this course will entail: (1) a much higher workload than any bachelor's degree course studied so far (2) a heavy dose of readings, and (3) a substantial amount of critical thinking.

### Duration of the Project:

15 Weeks

### Method of Assessment:

Continuous Internal Evaluation      100 marks  
(spread across the semester)

### Semester End External Evaluation

Dissertation      200 marks

Seminar      100 marks

Viva voce      100 marks

(shall be conducted at the end of the Semester)

There shall be a panel of three Examiners for the Semester End External Evaluation, comprising of Faculty Supervisor, one faculty member-internal examiner and one external examiner.

### Research Project Work Schedule:

#### Week 1 : Research Seminar

Learners will be helped to select a topic of his/her choice and prepare a paper (3-4 pages) and present it in a seminar organised by the department in the end of the week.



Method of Internal Assessment: Two faculty members (Faculty supervisor and the faculty member who is teaching research methodology papers)

#### Week 2 : Research Proposal

In this week using the learning of previous semester about the research process learners would prepare research proposal. Learners will select a research problem of his/her choice for this proposal and submit it at end of the week. This proposal will be 5 to 6 pages. It would include (1) Introduction of research problem, (2) Review of literature related to the problem, aims and objectives of the proposed research problem (3) Materials and Methods related research problem (4) Results related to the methods by using with suitable statistical tools, (5) Discussion, Summary and Conclusion of the research findings on basis of the proposed problem, submit some of the significant references as bibliography. Learner will be required to present his/her research proposal at the end of the week in 15-20 minutes in the class room.

Method of Internal Assessment: Two faculty members (Faculty supervisor and the faculty member who is teaching research methodology courses) will assess the proposal.

#### Week 3: Literature Collection

In order to collect the requisite literature for research study, learners are required to and use various methods of information through review articles/ research journals/ various web links. Learners are advised to prepare the review of the literature related to the research proposal through the recent literature information. This will strengthen the design of the Aim and objectives of the research proposal.

#### Week 4: Designing of the Methodology

In this week the learners will collect the literature related to the methodology to be used in the present proposed research proposal by using different SOPs. The interpretation of the data obtained from the results also can be selected for the present study.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

#### Week 5: Results Processing and analysis

Once the results are obtained, the learners will be used various methods in representation of figures, tabular, graphical methods to process it. The analysis of the results will be processed by using various data packages.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

Week 6: Discussion on interpretation of the results, summary and conclusion  
In this week the learners will be helped to discuss the results obtained in the previous week and interpret the results by using the supporting literature published earlier. After thorough discussion the summary can be obtained with the respective results obtained earlier. Finally, it will be concluded the findings of the present proposed research proposal. It will be followed by adding the references as bibliography and also appended the preparation of solutions, buffers, media etc.,

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by the learner in data collection.

Week 7 and Week 8: Writing of Chapter I : Introduction

The research report starts with the 'Introduction' of the research problem. It introduces the topic or research under investigation and its importance. The introductory chapter gives the background to the specific area of investigation. This is followed by a brief statement of the problem under study. It is also necessary to explain the significance of the present problem.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

Week 9: Writing of Chapter II : Review of Literature

The next task of the researcher is to present a review of the relevant literature. This includes a critical analysis of earlier research studies. As such, while reviewing literature, it should be kept in mind that literature has been critically examined in terms of agreements and disagreements among the researchers in order to justify the necessity for conducting the research study. Here researcher is expected to describe precisely and clearly the Aim(s) and objective(s) of the research study.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

Week 10 and Week 11: Writing of Chapter III : Materials and Methods related research problem

This is followed by a description of the design of a study. This section provides a detailed overview of "how" the study was conducted. The various sub-sections include: i) description of the research design of the study, ii) variables: the independent, dependent and control variables with their

operational definitions; iii) sampling procedures : defining the population, and drawing of sample for the present study; iv) listing and describing methods and tools of data collection used in the study, like questionnaires, attitude scales, etc., their reliability, validity and administration etc.; v) describing the statistical procedures used in the analysis of data including the rationale of the use and method of data analysis.

Method of Internal Assessment: Faculty supervisor will assess the method and procedures used by learner in data collection.

Week 12 and Week 13: Writing of Chapter IV: Results processing and analysis related to the methods by using with suitable statistical tools

The findings of the results will be presented in the form of figures/photos, tabular and graphically. The outcome of the research is presented in tabular form with the help of statistical procedures. The results are analysed and interpreted and presented in the form of research report. The figures do not necessarily; repeat the tables, but present data visually for easy understanding and easy comparisons.

Method of Internal Assessment: Faculty supervisor will assess the quality of analysis and interpretation of data.

Week 14 and Week 15: Writing of Chapter V: Discussion, Summary and Conclusion of the research findings on basis of the proposed problem

The fifth chapter in a research report deals with the discussion based on results which are analysed with the interpretation of the literature. Depending on the interpretation of the discussion with correlation of the results the summary of the research problem can be narrated on chronological way. The Conclusion will be given depending on the research finding of the proposed problem. After conclusion the references will be added as bibliography and followed by the appendix as preparation of solutions, buffers and media or any other information related to the research proposal. If possible, the faculty supervisor may advise the student to submit the plagiarism certificate, which will be useful to the candidate to understand about the writing skills of the research report.

Method of Internal Assessment: Faculty supervisor will assess the presentation of major findings depending on the methodology used, presentation of results, interpretation of the results with discussion, summary of the proposed research problem and conclusion.

**Though the Research Project is to be completed in the 8<sup>th</sup> Semester, the work could be initiated in the 7<sup>th</sup> Semester itself.**

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## **VI. Standard Operating Procedures for Universities & Colleges**

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### **1. Guidelines for implementation of the 4<sup>th</sup> year of 4-year UG Degree with Honours**

#### **1.1. Eligibility for students to pursue 4<sup>th</sup> year of 4-year UG Degree with Honours:**

1. Students shall have passed in all the courses of semester 1 to 6.
2. Eligible students who pursued the first three years in a college shall automatically be promoted to 4<sup>th</sup> year of 4-year Degree within the same college, without any new admissions.
3. A student shall have choice to exit after three years and pursue the 4<sup>th</sup> year in another college, within the same University jurisdiction, provided vacancies exist in that college or in the 4<sup>th</sup> year programme offered in the affiliating University.

Note: Students shall pass all courses in Sem 1 to Sem 6 along with successful completion of mandatory 10-month internship, if he/she wishes to quit after three years with a normal Degree.

#### **1.2. Eligibility for Colleges to offer the 4<sup>th</sup> year of 4-year UG Degree with Honours**

Colleges with more than 30% average admissions against the sanctioned intake in the last three years are eligible to offer the 4<sup>th</sup> year of 4-year UG Degree with Honours. The Colleges shall exercise option in offering the Honours programmes in any one major out of the three majors, from among the sanctioned programmes. For ex., a College sanctioned with B.Sc Botany, Zoology and Chemistry can exercise an option to offer Honours program in either Botany or Zoology or Chemistry.

Colleges shall intimate the vacancies existing in their programmes only after admitting their own students to the affiliating university. The affiliating university shall take up admissions to fill up such vacancies by students from other colleges, by following the rule of reservation and merit. The admissions shall be made only after the declaration of the 6<sup>th</sup> Semester results.

The Colleges shall submit the list of students pursuing the 4<sup>th</sup> year of 4-year UG Degree with Honours to their respective Universities for ratification and upload the ratified list in the Jnanabhumi portal for fee reimbursement. A copy of the admitted students shall also be sent to the APSCHE.

### **1.3. Eligibility for Universities to offer One-Year Degree Honours Program (the 4<sup>th</sup> year of 4-year UG Degree with Honours)**

Universities are free to offer One-Year Degree Honours Program (the 4<sup>th</sup> year of 4-year Degree with Honours) and/or one year Degree honours with research program in their existing PG departments, within the available infrastructural facilities and without seeking additional teaching positions. However, the model curricular structure advised by the AP State Council of Higher Education shall be adopted by the respective BoS of the Universities. Wherever, the common syllabus is provided for various subjects, the same is to be complied with. The Universities can design the syllabus, following the same curricular framework for subjects where the syllabus is not drafted.

Universities shall notify all such programmes of One-Year Degree Honours Program (the 4<sup>th</sup> year of 4-year UG Degree with Honours) and/or one year Degree honours with research program with the number of seats and admit students following the rule of reservation and merit.

The Colleges shall intimate the vacancies existing in their programmes only after admitting their own students to the affiliating university. The affiliating university shall take up admissions to fill up such vacancies by students from other colleges, by following the rule of reservation and merit.

The admissions into the One-Year Degree Honours Program and/or one year Degree honours with research program shall commence only after the declaration of the results of 6<sup>th</sup> semester.

The Universities shall upload the details of the students admitted into the One-Year Degree Honours Program (the 4<sup>th</sup> year of 4-year UG Degree with Honours) and/or one year Degree honours research with program on the Jnanabhumi portal for fee reimbursement. A copy of the admitted students shall also be sent to the APSCH.

## **2. Guidelines for implementation of the 4<sup>th</sup> year of 4-year UG Degree programme (Honours with research)**

### **2.1. Eligibility for students to pursue 4th year of 4-year Honours with Research Degree:**

1. Students shall secure 75% marks and above in group subjects (excluding languages, LSCs and SDCs).
2. Students shall pass in all courses in Sem 1 to Sem 6 along with successful completion of mandatory 10-month internship.
3. A student shall have choice to exit after three years and pursue the 4<sup>th</sup> year of 4-year Honours with Research Degree in another college, within the same University jurisdiction or in college affiliated to another University, or in the 4<sup>th</sup> year programme offered in any University, provided vacancies exist in that college/university.

### **2.2. Eligibility for the Colleges to offer the 4th year of 4-year Honours with Research Degree:**

1. Colleges with more than 30% average admissions in the last three years are eligible to offer the 4<sup>th</sup> year of 4-year UG Honours with Research Degree in the sanctioned Programs with at least two permanent faculty members with Ph.D. degree in the respective departments.
2. If a recognized Department loses permanent faculty with Ph.D, the Department shall not be eligible to offer the said programme, until faculty with the required qualification are recruited.
3. The number of seats in a specialisation area depends upon the number of faculty with Ph.D Degrees. Not more than 5 students per eligible faculty shall be the intake for the department.
4. The Section shall be stream-wise, i.e., for Science, Arts and Commerce streams. The maximum strength per section for the 4th year (Honours with Research) shall be 40. If the strength exceeds 40, the surplus shall be treated as a new section with an intake of the next 40 and so on and so forth.
5. Infrastructure facilities like library, access to journals, computer lab and software, laboratory facilities for carrying out experimental

research work, and any other specific requirement of the University shall be provided. An amount of Rs. 1,00,000 shall be allocated per year per programme for creating research infrastructure and facilities. The expenditure incurred with this allocated amount shall be verified while according approval for the next academic year.

6. The admissions into the 4<sup>th</sup> year of 4-year UG Honours with Research Degree shall commence only after the declaration of the results of 6<sup>th</sup> semester.
7. Colleges shall intimate the vacancies existing in their programmes only after admitting their own students to the affiliating university. The affiliating university shall take up admissions to fill up such vacancies by students from other colleges, by following the rule of reservation and merit.
8. A copy of the admitted students shall also be sent to the APSCHE.

**2.3. Eligibility for the Universities to offer One-Year Honours Degree with Research (the 4<sup>th</sup> year of 4-year Honours with Research Degree):**

1. Universities are free to offer one year Degree Honours with Research in their existing PG departments, within the available infrastructural facilities and without seeking additional teaching positions. However, the model curricular structure advised by the AP State Council of Higher Education shall be adopted by the respective BoS of the Universities.
2. The number of seats in a specialisation area depends upon the number of faculty with Ph.D Degrees in each department. Not more than 5 students per eligible faculty shall be the intake for the department.
3. The admissions into the One-Year Degree Honours with Research Program shall commence only after the declaration of the results of 6<sup>th</sup> semester.
4. Universities shall notify all such programmes of One-Year Degree Honours Program (4<sup>th</sup> year of 4-year Honours with Research Degree) with number of seats and admit students following rule of reservation and merit.
5. Colleges shall intimate the vacancies existing in their programmes only after admitting their own students to the affiliating university. The

affiliating university shall take up admissions to fill up such vacancies by students from other colleges, by following the rule of reservation and merit.

6. The Universities shall upload the list of admitted candidates into the One-Year Degree Honours with research Program on the Jnanabhumi portal for fee reimbursement. A copy of the list of admitted students shall be forwarded to APSICHE.

#### **2.4. Procedure for obtaining permission by the Colleges to offer the 4th Year of 4-year Honours with Research Degree:**

1. The Departments which are recognized as research centres may conduct a 4-year UG Degree (Honours with Research) without obtaining any approval from the APSICHE and university.

2. Private Unaided Degree Colleges which do not have research centers, fulfilling the eligibility conditions and which intend to offer 4th year of 4-year UG Honours with Research Degree Programme need to apply in the prescribed format to the affiliating University upon issuance of notification within the prescribed time, in accordance with the guidelines issued.

2. After prima-facie scrutiny of the application and the documents submitted by the institution, the deficiencies shall be intimated.

3. Subject to fulfilment of deficiencies, permission is granted after inspection of instructional and infrastructural requirements by the inspection committee.

4. Government Degree Colleges and Aided programmes in Aided Degree Colleges which fulfil the eligibility conditions and who intend to offer 4th year of General Degree honours Programme need to apply in the prescribed format to the Commissionerate of Collegiate Education upon issuance of notification within the prescribed time, in accordance with the guidelines issued. For unaided programmes offered in Aided Degree Colleges shall apply to the APSICHE for necessary approval.

### **3. Transfer of admission from college to college/university**

#### **3.1. Exit of the student after three years of study:**

A student desirous of pursuing 4<sup>th</sup> year Degree with Honours or Honours with Research can exit from the College, where he/she pursued the first three years of study, if the College is not eligible to offer the 4<sup>th</sup> year Degree



Programme of his/her choice and seek entry into another College or University for the 4<sup>th</sup> year of study.

A student can also exit from the College where he/she has pursued the first three years of study, even if the College is willing to offer the 4<sup>th</sup> year of study and seek entry into another College or University for the 4<sup>th</sup> year of study.

**3.2. Entry of student for the 4<sup>th</sup> year of study:**

A student can seek entry into the 4<sup>th</sup> year of study in a college/university, provided there are vacancies in that particular programme in that college/university. The transfer admission shall be within the intake permitted to the college. A college shall give preference to those who have completed the three years of study from the same college and the remaining vacancies to be filled by new entrants. The new entrants shall be selected on merit basis, following the rule of reservation. The student joining afresh for the 4<sup>th</sup> year of study shall obtain and submit his Transfer Certificate from the college where he/she completed the first three years of study.

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***VII. Conclusion***

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The Government of Andhra Pradesh has implemented the recommendations of National Education Policy 2020 in true spirit and one of the major recommendations implemented is the introduction of 4-year UG Honours Programmes viz., 4- year UG Program with Honours and 4-year UG Honours Programme with Research from the Academic Year 2020-21 onwards.