**(1) Course Summary Template**

1. **Paper Code**: ICT/001
2. Mode: Blended Online Mode
3. **Title**: **Computer Programming**
4. **Type of paper**: (Foundation/ Discipline/ Elective): Foundation
5. **Cohort for which it is compulsory**: **6th Semester**
6. **No of Credits**: 4
7. **Semester and Year Offered**: Winter Semester 2017
8. **Course Coordinator and Team**: Prof. K. Srinivas / Email :[drksvasu@gmail.com](mailto:drksvasu@gmail.com)
9. **Pre-requisites**: Knowledge of high school mathematics is essential and adequate Exposure to pre-calculus is desirable
10. **Aim**:

Basic concepts of computer programming are introduced starting with the notion of an algorithm. Emphasis is on developing the ability to write programs to solve practical computational problems.

1. Level:
   1. Introductory
   2. Length: 24 weeks
   3. Estimated Effort: 8 hours/week
   4. Subject: Computer Science
   5. Institution: NIEPA
   6. Languages: English
   7. Video Transcripts: English
   8. Price: FREE
2. **Brief description of modules/ Main modules**:
3. Algorithms
4. Elements of C/C++ programming languages
5. Basic data types
6. Sequential and conditional execution
7. Iterative solutions
8. Arrays, matrices and their applications
9. Functions
10. Sorting and searching
11. Elements of string processing
12. Introduction to pointers
13. Basics of Software Engineering
14. Structures

### Learning Outcomes of the Paper

* 1. Learn to write C++ programs, compile, and execute using the gcc/simplecpp compiler
  2. How to inculcate good programming practices
  3. How to write programs and develop the ability to solve practical real world computational problems
  4. How to logically think and produce a solution (program)

1. **Paper Evaluation**

|  |
| --- |
| * 1. Online Examination Method      1. MCQ – 20%      2. Assignments – 20% [ Cumulative ]      3. Case Studies/Collaborative Learning - 20% [ Cumulative ]   2. OFF LINE Examination Method      1. Mid-term test – 20%      2. Semester-end examination – 20% |

1. **Suggested Readings**
   1. Goyal, D.P. (2006). Management Information Systems: Managerial Perspectives (2nd Edition), Macmillan India
   2. Laudon, K.C., Dass, R. and Laudon, J.P. (2010). Management Information Systems: Managing The Digital Firm (11th Edition), Pearson
   3. Mohapatra, S. and Joseph, P.T. (2009). Management Information Systems in a Knowledge Economy (1st Edition), Phi Learning
   4. O’brien, J.A. (2006). Management Information Systems (7th Edition), Tata McGraw Hill
   5. Robert, M.G., Joel, R.E. and Claggett, R. J. (2009). Information Systems for Modern Management (3rd Edition), Phi Learning
2. **Code: Course Introduction Video**

<iframe width="420" height="315" src="https://www.youtube.com/embed/HCfca1ad03E" frameborder="0" allowfullscreen></iframe>

**{2} Format for Content Uploading in a Course**

Unit /Module Heading

Brief Introduction to the Module/Unit

Module/Unit Outline

Learning Outcomes of the Module/Unit

Embedded Video ( From Youtube )

**Resources**

* Video Link ( From Youtube)
* Power Point Presentation File Link ( From Google Drive)

**Assessments**

* Multiple Choice Quiz (MCQ) Test
* Discussion Form ( Collaborative Learning)
* Online Assignment Submission
* Feedback

**{3} FLIPPED CLASS ROOM - CONTENT & ASSIGNMENT TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **SNO** | **UNIT NAME** | **RESOURCE DETAILS** | **ASSESSMENT DETAILS** |
| 1. | Introduction to Computer Programming | 1. <iframe width="420" height="315" src="https://www.youtube.com/embed/HCfca1ad03E" frameborder="0" allowfullscreen></iframe>     ( **Source: YOUTUBE OER Resource** Embedded Video Link)   1. <https://youtu.be/yKHVudOVROA>   ( **Source: Prepared by Faculty** using **Presentation Tube Software** Video Link)   1. Power Point File [ Prepared by Faculty: Linking from Google Drive] 2. e-Resource PDF File [ **Linking from Google Drive**] 3. Video Prepared with “Screencastify”app | **ONLINE** Multiple Choice Questions ( QUIZ)  **Online** Discussion Form  **Online** Assignment Submission  Feedback  Chat |

**{4} Responsibilities of user with Teacher [role]**

1. **Create online Courses (Paper)**
2. **Advertise the Paper**
3. **Enroll the Users with “Student” Roles and Assigning them in a Paper**
4. **Populating the Paper - Uploading Resources**
5. **Setting up the Assessments - Providing the Feedback**
6. **Open Forms**
7. **Divide the Students in Groups**
8. **Create Online Tests and Examinations**
9. **Open Chat Sessions**
10. **Maintaining the Course**

**{5}** **Responsibilities** **of User with Student [role]**

1. **Follow Lessons**
2. **Accessing the Course Contents**
3. **Upload homework and Tests**
4. **Participate in Chat Sessions**
5. **Take part in Discussion Forms**

**{6} Content Sharing and Security with Google Drive**

**How to attach a File ( as Link ) using Gmail**

Step 1: Open [www.gmail.com](http://www.gmail.com)

Step 2: Enter “Username “and Password

Step 3: Select “Google Apps” option on the Right Top Corner

Step 4: Select “”Google Drive””

Step 5: Create a “Folder”

Step 6: Upload the “doc” file [ created before LUNCH TIME| in to the Folder

Step 7 : Share the File with Friend { As a LINK Attachment}

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**{7} Collaborative Working with Google Drive**

**How to set a Question Paper in a Collaborative Mode**

**Step 1: Open Google Drive**

**Step 2: Create a File using “Google Docs”**

**Step 3: add 3 Examination Questions**

**Step 4: Share with “Edit Option” with your Gmail Friend**

**Step: Also try “Comments Only” and “View” only options**

**{8) Learning About the Content Creation Process**

**Video Lectures**

* + 1. **Only Lecturing Method**
       1. **Using the Camera with Smartphone or Windows**
    2. **Lecturing Cum Demonstration with Screen Casting**
       1. **Software used: Presentation Tube**
    3. **Demonstration Cum Screen Casting**
       1. **Sofware used : Tipcam**

**{9} Youtube Videos Downloading & Uploading**

1. **Different Methods to download the Videos from Youtube**
   1. **Downloading on your computer**
   2. **Using the “Embedded Video”& “Video Link”Option**
2. **Uploading a “Sample”video in to Your Own “Youtube”Channel**
   1. **Privacy Options [ Public | Private | Unlisted ]**
   2. **Selecting the appropriate “License “to your video**
   3. **Collecting the “Embedded Code”of your video**
   4. **Deleting the Video from the Your Youtube Channel**

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**{10} STEPS TO DOWNLOAD and SHARE a Presentation Created with the Help of Screen Capturing Software (Tipcam)**

**Step 1: Download the Tipcam Software from** [**http://tipcam.en.uptodown.com/windows**](http://tipcam.en.uptodown.com/windows)

**Step 2: After installation of the Software use the “Record” Button to record the Presentation**

**Step 3: Try to Use “Joom in “Function**

**Step 4: Use “Stop” button to stop the recording and use “Save” button to save the Presentation**

**Step 5: Save the File in your Personal “Google Drive” and “Share” with your colleagues [ Use “Comments” and “View” options]**

**Step 6: Upload the File Created with Tipcam in to your Youtube Channel with “Public” Privacy and “ Standard Youtube Licence” and “Publish” the Video.**

**Step 7: Try to share the “Video Link” and “ Embedded Code” with your colleagues**

**{11} Steps to access the HOME PAGE contents of Prof. K. Srinivas Moodle MOOC site from”Moodle Mobile “ app**

Step 1: Site Address : <http://162.144.90.128/srinimoodle/>

Step 2: Click “Connect”

Step 3: Username: test1

Step 4: Password: Xyz@12345

Step 5: Click “ Log in”

Step 6: Select C:\Users\Admin\Desktop\menu icon.png appearing on the Left Corner and Click “Site Home”

**{12}Personal Moodle Cloud Site Details**

**URL: https://amitkumar.moodlecloud.com**

**Username : admin**

**Password: Whatever you have entered**