###### Certificate Course in -WEB APPLICATION DEVLOPMENT

###### Course Details-

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Module Name | Theory Hours | Lab Hours |
|  | Web Basics | 4 | 4 |
|  | HTML 5 | 12 | 14 |
|  | CSS 3 | 10 | 12 |
|  | Java Script | 20 | 20 |
|  | Node .JS | 10 | 10 |
|  | MYSQL | 10 | 10 |
|  | Jquery | 12 | 12 |
|  | Ajax | 12 | 12 |
|  | React Js | 24 | 24 |
|  | Angular 8 | 30 | 30 |
|  | Responsive Web Design | 14 | 14 |
|  | Total | 320 | |

* Course Id :
* Candidate Eligibility: Graduation in Science with Computer Science / Information Technology/ Electronics/ Mathematics/ Physics/ Computational Science/ Arts/ Commerce with PCm in 12th or Engineering with Computer science and Information technology.
* No. Of NOS (If QP) :
* NSQF Level : 7
* Cost Category :
* Course Duration (in hours):320
  + Theory duration : 158
  + Practical duration : 162
  + OJT duration,if any : NA

**Trainer Qualification Work Experience**

|  |  |
| --- | --- |
| **Trainer Qualification** | **Work Experience** |
| * Minimum – 5 Year Experience * Certified for Job Role: “Trained by Cdac minimum accepted 50% * Recommended that the Trainer is certified for the Job Role: “Trained In Web Application Devlopment and Databse with minimum 5 years . | * Minimum 5 year\_\_\_\_\_\_\_\_experience in relevant job role and a Minimum of \_5\_\_\_ years and Training experience in relevant job role. |

**CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE**

**Name and address of submitting body: Sai Educational & Health Awareness Trust**

**( Career Foresight C-DAC ATC)**

**Registered Address- Flat No 407 Pandey Mall ,beside Times of india Building,Frazer Road Patna, 800001**

**Office Address- Plot No:**Pushpa kunj, A.N. Path, OPP- A N College, Besides Petrol

Pump, Boring Road Patna, Bihar 800013.

**Name and contact details of individual dealing with the submission**

**Name : Arun Kumar Singh**

**Position in the organisation : Managing Trustee**

**Tel number(s) :**

**Mobile : 8826783343/9204056492**

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**Name and contact details of individual dealing with the submission from CDAC ACTS**

**Name: Nitin Pawar**

**Designation: Joint Director (CDAC ACTS)**

**Email Id:** [**nitinp@cdac.in**](mailto:nitinp@cdac.in)

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**Address: C-DAC , CDAC Innovation Park Panchvati, Pashan, Pune -411008**

|  |  |
| --- | --- |
| **Qualification Title** | **Certificate Course in Web Application devlopment** |
| **Qualification Code** |  |
| **Nature and purpose of the qualification** | **Nature: IT Skills**  **Purpose: To provide students with the necessary skills for WEB APPLICATION DEVLOPMENT and creating job opportunities or making students self-reliant in order to make the work as freelancer** |
| **Body/bodies which will award the qualification** | **C-DAC ACTS** |
| **Body which will accredit providers to offer courses leading to the qualification** | **C-DAC ACTS** |
| **Body/bodies which will carry out assessment of learners** | **C-DAC ACTS** |
| **Occupation(s) to which the qualification gives access** | **Web Application Developers** |
| **Licensing requirements** | **NO** |
| **Level of the qualification in the NSQF** | **7** |
| **Anticipated volume of training/learning required to complete the qualification** | **320 Hours** |
| **Entry requirements and / or recommendations** | **Graduation / Engineering** |
| **Progression from the qualification** | **Students will get placed or become a Web Developer trainer based on this course.** |
| **Planned arrangements for the Recognition of Prior learning (RPL)** | **The admission process shall be based on the application received and conduction of the common entrance test based on the CET examination result the qualified candidate as per the rank shall be admitted to CCWAD Course** |
| **International comparability where known** | **\_** |
| **Date of planned review of the qualification.** | **C-DAC ACTS will conduct the examination of all the modules at the end of the course. C-DAC ACTS shall also provide course progress report.** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Formal structure of the qualification** | | | | | |
| **Title of component and identification code** | | | **Mandatory/ Optional** | **Estimated size (learning hours** | **Viva –voce** | **Practical hours** | **Level** |
| Web Basics | | | M | 8 | 4 | 4 | **7** |
| HTML 5 | | | M | 26 | 12 | 14 | **7** |
| CSS 3 | | | M | 22 | 10 | 12 | **7** |
| Java Script | | | M | 40 | 20 | 20 | **7** |
| Node .JS | | | M | 20 | 10 | 10 | **7** |
| MYSQL | | | M | 20 | 10 | 10 | **7** |
| Jquery | | | M | **24** | 12 | 12 | **7** |
| Ajax | | | M | 24 | 12 | 12 | **7** |
| React Js | | | M | 48 | 24 | 24 | **7** |
| Angular 8 | | | M | 60 | 30 | 30 | **7** |
| Responsive Web Design | | | M | 28 | 14 | 14 | **7** |

**ASSESSMENT**

**Body/Bodies which will carry out assessment:**

**C-DAC ACTS**

**How will RPL assessment be managed and who will carry it out- The admission process shall be based on the application received and conduction of the common entrance test based on the CET examination result the qualified candidate as per the rank shall be admitted to CCWAD Course. The assessment will be managed by: C-DAC ACTS**

**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.**

**1. ASSESSMENT GUIDELINE:**

- EVALUATION GUIDELINES

# Evaluation

Evaluation is an essential part of conducting the Certificate Course in Web Application Development (CCWAD), as it provides important feedback and inputs to both the centre and the students. The centre gets an idea about the relative performance of each student, which also serves as feedback about the design and conduct of the course. The student gets a clear picture of his/her academic standing, individually and in comparison, to his/her fellow students.

In order to ensure timely and efficient evaluation and certification of all students, the following guidelines are being issued and should be followed religiously.

# Evaluation Methodology

* + We have a Designated Responsible Member (DRM) for evaluation.
  + The DRM-Evaluation would be responsible for coordinating all activities relating to evaluation at the training centre and for communicating with the CDAC ACTS.
  + Evaluation is a compulsory part of the process of obtaining the CCWAD certificate.

All students are required to pass each module of the course in order to be eligible to receive the CCWAD Certificate.

* + The faculty of every module should outline the objectives of the evaluation to be conducted for that module, so as to enable the students to prepare themselves properly.

# Module-wise Evaluation

1. A separate evaluation process is to be conducted for every module of the course. The evaluation for each module must be completed as per the guidelines given below. The mid-module/surprise test evaluation is optional and may be held after discussion with the concerned faculty.
2. Students are evaluated on a continuous basis throughout the duration of the course. To have a very uniform and fair assessment, the evaluation process is divided into two parts:
   1. Continuous Assessment – CA
   2. Centralized Course End Examination – CCEE

# Continuous Assessment

This is being done primarily by the respective faculty in the form of lab tests, assignments, quizzes etc conducted with the help of the respective course coordinators at regular intervals, as and when the portions of the modules are completed. These are basically internal exams and the process is further categorized into two parts.

1. Lab test: It should definitely include minimum one lab exam. It may also Include assignment, viva, etc.
2. Internal test: Assignments, case studies, quiz, viva, attendance, etc. depending on the subject and the faculty.

# Weightage of Marks

The figures shown below indicate the weightage of each component of a module in the final performance statement. The examination(s) for each module must be conducted for at least that number of marks. However, the centre may conduct evaluation for a higher number of marks, in which case the marks will be scaled down. For example, if the lab test for a module is conducted for 100 marks, the marks earned by the students will be scaled down to out of 40.

The weightage for each component will normally be:

Theory - 40% through Centralized Course End Examinations (CCEE) Laboratory - 40% (Lab part of Continuous Assessment)

Internal Test - 20% (Internals part of Continuous Assessment)

Note: Where a module does not have a practical component, the lab component weightage will be merged with the Internal Test weightage.

# CCWAD Marks Distribution

The figures shown below indicate the weightage of each subject in the final performance statement for CCWAD.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module Name** | **Contact Hours** | | | **Internal Evaluation &**  **Marks** | **Marks** | | | |
| **Theory** | **Lab** | **Total** | **ME** | **Lab** | **IA** | **Total** |
| Web Basics | 04 | 04 | 08 | Web Basics:  HTML5:  CSS3:  JavaScript: | 20 | 20 | 10 | 50 |
| HTML5 | 12 | 14 | 26 |
| CSS3 | 10 | 12 | 22 |
| JavaScript | 20 | 20 | 40 |
| Node.JS | 10 | 10 | 20 | Node.JS: | 20 | 20 | 10 | 50 |
| Database concepts - MYSQL | 10 | 10 | 20 | Database concepts: | 20 | 20 | 10 | 50 |
| jQuery | 12 | 12 | 24 | JQuery | 20 | 20 | 10 | 50 |
| Ajax Framework | 12 | 12 | 24 | Ajax Framework: | 20 | 20 | 10 | 50 |
| React JS | 24 | 24 | 48 | React JS: | 20 | 20 | 10 | 50 |
| Angular 8 | 30 | 30 | 60 | Angular 8: | 20 | 20 | 10 | 50 |
| Responsive Web Design | 14 | 14 | 28 | Responsive Web Design: | 20 | 20 | 10 | 50 |
| **Total** |  |  | **320** | **-** |  |  |  |  |

# Centralized Course-End Examinations (CCEE)

There will be CCEE conducted after completion of all the modules of CCWAD. These exams will test the knowledge of the students about the concepts of each module and is a compulsory part of the evaluation. Conducting CCEE involves performing duty with responsibility. It is a joint effort which has to be carried out in a combined way by the CDAC ACTS and our training centre . Right from receiving the question paper from the CDAC ACTS centre to publishing the results, all tasks to be dealt with a lot of responsibility and confidentiality.

# Guidelines of CCEE

The computerised CCEE should be of 60 minutes duration. It should consist of 40 objective-type questions with 4 maximum answer options having only one correct option. The value of each objective type question is of one mark only. There will not be any negative marks for the wrong answers given by the students. A typical objective type exam paper may contain the following types of questions:–

**º** Multiple choice

**º** Yes or No

**º** True or False

Objective type questions are useful in testing the recognition and recall abilities of students. They also help in keeping the exam short and easier to evaluate.

# Guidelines for setting CCEE Question Papers

While setting the question papers for theory exam, the following weightage should be assigned depending on the difficulty level of the questions.

|  |  |  |
| --- | --- | --- |
| **Levels** | **Requirements** | **Weightage** |
| Level A - Easy | Requires elementary knowledge which may be obtained by attending all lectures and completion of mandatory lab assignments | 25% |
| Level B – Medium | Requires thorough study of all course material, attendance at all lectures and completion of mandatory assignments | 50% |
| Level C - Tough | Requires study and lab work beyond the prescribed course material and mandatory assignments | 25% |

# Guidelines for generating CCEE questions

* Question paper setter has to use sample paper format provided by C-DAC.
* Mention the module name without fail.
* Language of the question should be easy to understand.
* Answer options must have relevant objective type choices and only one correct answer.
* Questions must be prepared by referring appropriate text-books, reference books, and course materials having good information.
* Questions must be created by the domain expert afresh and should not be copied directly from any book, website, existing previous question papers, etc.
* Questions should be unique and should not have been published anywhere else.
* Mention the source of the question wherever possible, as it may help in referring the same for detailing if required.
* The question paper should have questions covering the entire syllabus.
* The questions have to be typed in MS Word with “Arial” having letter size 12 point. Do not bold any letter, word or sentence in any part of the question paper.
* It is essential to give password to the word document and communicate the password separately.
* It is essential that utmost care is taken to maintain the secrecy of the soft copy at all times.
* An expert team will review all questions. Questions will be filtered as per following:
  + If the question is incomplete
  + If the answer of the question is wrong
  + If the question is not part of the syllabus
  + If the question appears more than once
  + If the question is too lengthy
  + If the question is irrelevant
  + If the options to the questions contain one and only one correct answer

# Attendance

Overall 80% attendance is required for a student to be eligible for the CCEE.

# Guidelines for Evaluation of Lab Exam

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Details** | **Max Marks** |
| Programming ability | Topic wise mini projects to show | 4 |
| Efficiency | Program is using only the required number of variables  /conditions/ loops/ pointers etc and is optimal | 2 |
| Correctness | The program produces desired output for a given input | 20 |
| The program handles all valid and invalid inputs |
| Software Engineering Principles | The program has meaningful variable/function names | 2 |
| The program is commented properly (At least 20% of the code should be commented) | 2 |
| Viva | Questions based on the lab test | 10 |
|  | ***Total Marks*** | **40** |

1. **Moderation**

Grace marks can be given to only deserving candidates as an exception and not as a rule. Grace marks would be awarded as per the methodology below:

1. Maximum of 4% of total CCEE/Lab test/Internal Assessment marks of all modules can be awarded to a candidate.
2. Maximum of 8% of individual module test marks (maximum marks) can be awarded per module.

|  |  |  |
| --- | --- | --- |
| **Type of Assessment** | **Total Marks** | **Max grace marks for the module** |
| CCEE | 40 | 3.2 |
| Lab Test | 40 | 3.2 |
| Internal Assessment | 20 | 1.6 |

Grace marks should be applied only after final marks are compiled for each component of the evaluation (ie, Internal Assessment, Lab Exam, CCEE and Project). On completion of the moderation exercise, the revised marks should be updated in the marks database.

If a student has cleared all the modules without availing any grace marks but is falling short by a few marks of attaining a better grade, then the competent authority may award additional grace marks at his/her discretion (subject to a maximum of 0.5% of total marks) on the aggregate total to enable the student to migrate to the next higher grade.

# Re-examinations

The following conditions will be applicable for the CCEE re-exams:

* + Students who do not appear for an exam on the scheduled date will not have an automatic right to re-examination. Only those students who, in the opinion of the Centre/Course Coordinator, have a genuine reason for being absent may be allowed to appear for re-exam.
  + Students who have failed an exam in first attempt only may be allowed to appear for its re-exam.
  + Re-exams should be conducted following the same process as the regular examination.
  + Students, who failed/remained absent in the CCEE, shall be allowed to appear in the re-examination only once.
  + On evaluation of their answer sheets 20% of the marks obtained by the students will be deducted towards de-rating for re-examination for arriving at the final score,

i.e. in order to clear the re-exam the student has to score a minimum of 50% marks instead of 40%.

* + The fee for the re-exam is currently NIL.
  + There will be no re-exam after the re-exam.

# Passing a Module

A student must score a minimum of 40% marks in each component of the evaluation, and also in the aggregate score, in order to successfully clear the module. If a student scores more than 40% on aggregate but has scored less than 40% in one component of the evaluation, he/she will not be declared as passed.

# General guidelines for award of grades

The marks of all the modules (each module with 100 marks) of CCWAD shall be added to get out of total marks. The course grades shall be awarded as mentioned in the below table.

|  |  |
| --- | --- |
| **%** | **Grade** |
| 85 and above | A+ |
| 70 to Less than 85 | A |
| 60 to Less than 70 | B |
| 50 to less than 60 | C |
| 40 to less than 50 | D |
| Less than 40 (Fail) | F |

# Ensuring Security of Evaluation data/records

* + Ensure that all data related to evaluation of students is stored in a secure place that cannot be accessed by unauthorized personnel.
  + All question papers must be prepared and stored in a separate area specifically designated for the purpose.
  + Whenever any external faculty sets a question paper, ensure that he/she follows the guidelines given by C-DAC ACTS
  + Ensure that only one copy of any question paper is prepared in physical (printed) form for review and revision.
  + When the question paper is finalized, print one master copy and get it signed by the paper setter, reviewer and DRM-Evaluation.

The data relating to evaluation of students, such as soft copies of question papers and answer keys, student marks database and performance statements etc. must be kept in a separate domain/directory which is accessible only to authorized personnel. Ensure that the data is regularly backed up.