



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुपति

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH TIRUPATI

Transit campus: Sree Rama Engineering College Campus, Rami Reddy Nagar,  
Karakambadi Road, Mangalam (B.O), Tirupati - 517 507

IISERT/PUR/0753/19

17/02/2020

**EXPRESSION OF INTEREST FOR PROVIDING OF DESIGN, DEVELOPMENT AND  
MAINTENANCE OF IISER TIRUPATI WEBSITE.**

A pre-indent conference is proposed to be held on 28<sup>th</sup> February, 2020 at IISER, Tirupati with the prospective creators & designers of websites, their authorized channel partners or agents/suppliers to discuss with the Committee on the aspects of Quality, Features, Design, any other essential parameters for providing of Design, Development and Maintenance of IISER Tirupati website.

The brief for the requirements is given below:

### Scope of Work for Design, Development and Maintenance of IISER TIRUPATI Website:

The IISER Tirupati invites Expression of Interest (EOI) from reputed Firms/ Organization/ Agency to design and develop a new dynamic website for the institute (<http://www.iisertirupati.ac.in>) with latest modules and tools.

The EOI should consist of two parts:

- I. Submission of tentative design, technique of development, proposed technology and project management;
- II. Submission of a brief write-up on each of the above aspects for evaluation.

#### **A. The website should fulfil the following criteria:**

- Making the website Dynamic with new look & feel, with latest software/ technologies.
- Advanced security features securing the website from any hacking vulnerabilities, threat, penetration, Brute force attacks, etc.
- The website will be interactive in all aspects and will include the menus in interactive and user friendly manner.
- The layout of the web framework should be responsive, to support dynamic rendering. The design should support cross browser rendering across all prominent operating systems as well as platforms such as desktops, laptops, and mobile devices. Users can open the website on any Smartphone, tab, iPhone and all other capable phones & mobile devices with the gadget compatibility.
- The new website should be based on an open source Content Management System (CMS), and should have a user-friendly interface to create, update, and upload content.
- The website should be platform independent - it can run on multiple platforms (operating systems).
- The site should support dynamic display and update of contents in the relevant pages.
- Home pages of all Centres/Departments of IISER TIRUPATI and its staff members of the institute should have a uniform design and should be organized in hierarchical structure.
- New Website should be a superset of existing IISER Tirupati website. Hence all contents of existing website shall be migrated to new website. This phase is expected to be a part of web development & design. The site should include pages for Tenders, Colloquium, About Us, Director, Board of Governors, Senate, Act and Statutes, Annual Reports, About Logo, About Tirupati City, People (Administration, Faculty, Post-Doctoral Fellow, Students, Research Facilities, Research Highlights, Research Publications, Disciplines, Education (BS-MS, I PhD, PhD), Admissions (BS-MS, I PhD, PhD), Facilities, Campus, Guest house,

Hostel, Health Center, Canteen, Gymnasium, Sports Facilities, Day Care, Library, About Library, Library rules, Online Databases, Library Catalogue, E-Journals, Print Journals, Research Facilities, Teaching, Computer lab, Contact, News & Events, Job Opportunities/ Career Openings, Technical/ Administration, Jobs Faculty ( Job Faculty, Project Assistant, PDRF), Sitemap, announcements, RTI, Anti razing, Students Activities & Clubs, Safety Guidelines, Womens Cell, Recruitment Portal.

- The website should provide a section accessible only to its employees on authentication. This section should provide facilities for downloading / uploading and updating Personal records, information of their profiles, Centres information, accessing circulars, notifications and viewing events etc.
- The website should have an e-governance related section accessible only to permanent employees on authentication. Admin of the website should have privilege to add or remove any user. This section should provide facilities for:
  1. Downloading/uploading/online filling administrative forms
  2. Personal Information Management System including pay slip archival, Pension statements, form 16, etc.
  3. Accessing circulars, Purchase and stores requests.
  4. Applying for Guest house, Hostel, Institute's Resources (vehicle, seminar hall, etc.), training/Workshop, etc.
- The website should have student related section which is accessible to the particular student. This section should provide facilities for:

Result / Marksheet / Timetable/ Examination/ Notice Board/ Academic Calendar / Attendance.
- The site should have a site-search facility, that searches pdfs, docs, images, text, videos, etc. and also permits searching for staff by name, designation, centres, regional centres, etc.
- Each page should copy right information along with last modified date.
- The administration page shall be made available through web login with proper authentication and access control which controls all the above features including backup/recovery/access control settings, user creation, publishing/ creating pages, change of menus, design/change of template etc. The content of the website would be synchronized for automatic backup every end of the day for last 30 days (not complete backup but only the changes may be recorded keeping the static data intact).
- The website shall be developed using latest version of bootstrap which enables the website to be compatible with any viewing device, be it laptop, personal computer, smart phones (having Android, iOS, Windows etc. as operating system), tablets, LCD screens etc. of varied sizes without compromising on the alignment, readability, structure and beautification of the webpage.

### Recruitment Portal

- Design, develop and host configurable web portal to manage the various recruitments (staff, faculty, project assistants, etc) and student admissions (I.Ph.D, Ph.D. etc) for IISER Tirupati
- The online application forms, instructions, information brochure etc for various posts/vacancies will be made available to the public through this portal. Interested candidates should be able to apply online including fee payment through payment gateways. The portal should also enable the authorized people to scrutinize and shortlist the applications. Various configurable options will be needed for the same. It should also support auto-generation of admit cards for shortlisted candidates. The portal should also support various CRM facilities like contacting all/shortlisted candidates through Email/SMS etc.
- Provide login to all the applicants to monitor the status of their application. Each application should get a unique auto-generated application number which the candidates can use for future reference.
- The portal should have an interface to configure various posts and vacancies available for recruitment from time to time. Each post/vacancy may have different eligibility criteria and the structure of the application form may hence be different.
- The application fee will have to be automatically calculated using a formula which involves the type of the post, category, gender etc. Candidates applying for more than one post should be able to make a combined single payment.
- Provide the following interface in the Administrator's login to manage various recruitment process:
  - Portal Configuration or Application Form configuration. The application forms will have to auto validate certain eligibility requirements (age, experience, marks etc).
  - Post Publishing.
  - Portal Management.
  - Candidate Scrutiny (multiple options).
    - Various filters and sorting options on the data entered will be needed
    - Export of all/selected/shortlisted candidates in csv format.
    - Individual and bulk actions to shortlist a subset of candidates (Multiple rounds of short listing should be supported for the same post). System should also support bulk shortlisting by importing a list of application numbers (when the shortlisting process is done outside of the system).
    - Portal should support multiple scrutinizers per post (the scrutinizers may be different for different posts). Each scrutinizer should be able to add a score and comments against each applicant. This comment and score should be viewable by other scrutinizers of the same post.
  - Interview Management functionality as given below (with multiple levels):
    - Interview/Test shortlisting.

- Interview/Test letters generation.
- SMS and Email Notification to Eligible Candidates.
- Send Interview letters over candidate Email ID and also provide utility to download the same in candidate login
- Appointment Management below functionality
  - Appointment Recommendation.
  - Appointment letters generation.
  - SMS and Email Notification to Eligible Candidates.
  - Send Appointment letters over candidate Email ID and also provide utility to download the same in candidate login.
- Joining Formalities.
- Generation of Various Reports.

### **B. Hosting, Development and Maintenance of Website: -**

- The website shall be hosted by the bidder in IISER TIRUPATI datacenter/ Cloud (which ever is beneficial for the institute). The necessary infrastructure related to hosting of website shall be provided by IISER TIRUPATI (Server, Operating System, Database, Licenses for development framework, if any if hosted in IISER TIRUPATI). The same website shall also be hosted on one of the test servers provided by IISER TIRUPATI.
- IISER TIRUPATI shall assist the bidder in terms of gaining access to the datacenter/server where IISER TIRUPATI website is hosted for development, deployment, hosting and maintenance of the website.
- The bidder shall maintain the developed website/provide support or warranty for the website for a period of 1 year from the date of Go-Live. (The date on which the website goes live from IISER TIRUPATI Datacenter's server). This support should essentially mean rectification of errors and correction or addition of content/pages/menu/sub-menu etc.
- The bidder shall redesign and revamp the existing website (www.iisertirupati.ac.in) to make it visually appealing with a suitable theme design following the latest web trends and technologies along with migration of existing pages. Bidder may take reference from the existing website of IISER TIRUPATI.

### **C. Compliance to Audit/Guidelines**

- After development of the website and before deploying the same on production server, the bidder should get the security audit done by a CERT-IN empaneled information security auditing organization as per CERT-IN guidelines. A certificate to this effect should be submitted to IISER TIRUPATI before deploying the website on production server. Any fee/charges incurred on account of CERT-IN certification are to be borne by the bidder.
- Bidder shall apply all the requisite testing techniques such as Application Development and Unit Testing, Integration Testing, Security Testing, System

Testing and Functional Testing. The testing of developed website shall be entirely based upon:

- Compliance to Guidelines for Indian Government Websites (GIGW)(<https://web.guidelines.gov.in/ComplianceMatrix/index>). A self-certification by bidder to this effect should be submitted.
- Compliance to the scope of work and requirement gathered.
- Assessment of the user objective achievement etc.
- Adherence to commonly accepted standards and practices, including W3C compliance.

### **D. Security**

- All possible security measures should be taken to prevent hacking of the website and the bidder should have contingency plan in place for situation like these.
- Security provisions should be as per OWASP guidelines to handle latest vulnerabilities such as:
  - SQL Injection
  - Cross Site Scripting (XSS)
  - Broken Authentication and Session Management
  - Insecure Direct Object References
  - Security Misconfiguration
  - Cross Site Request Forgery

The above list is just illustrative and not exhaustive.

- The bidders shall be solely responsible for Security Audit by a CERT-In empaneled information security auditing organization as and when required as per CERT-In guidelines.
- The developed website shall work on HTTPS protocol and bidder shall be responsible for obtaining SSL certificate for the same. Any charges borne on account of obtaining and implementing SSL certificate shall be in the scope of bidder.
- Separate authentication privileges for super-user and normal users for website & Database management.

### **E. Features**

- Search Engine Optimization – The search engine optimization of the new website shall be done in such a way that it appears in the top 10 results of major search engines like Google, Bing, Yahoo etc., preferably on the first position while searching with the names/keywords, which shall be provided by IISER TIRUPATI during the implementation phase. It should also support organic search. The scope of optimizing the search engine shall continue until the validity of this project.
- Multiple Font Sizes – The website should have hyperlinks to scale-up/scale-down font size of the content of webpages. (A- | A | A+).

- Embedding Maps – The website should have a provision to embed maps for registered office, corporate office and branch offices of IISER TIRUPATI in satellite view and maps view.
- Web Analytics and Visitor Count - Website should have the provision to record number of visitors and should also be compliant to various parameters of web analytics which would help IISER TIRUPATI in making informed decisions about optimizing website content.
- Least Site Opening Time – Bidder shall ensure that website (Home Page) opens in least time possible i.e. the hyper-references and javascripts should be placed in such a way that the rendering time of the website is not compromised.
- Detection of Requesting Device and Respective Rendering - The website should have the provision to detect the device from which the rendering request is being received and correspondingly post the response. For example, if the request is coming from any mobile device, the website should automatically detect the device type or browser type and render the mobile view of the website.
- Screen Reader Access - The contents of the website should be readable using any Screen Access Reader Software to Visually Impaired Users.
- Need to integrate Secure payment gateway.
- Website should be scalable for future requests.
- Anti-spamming feature.
- Dynamic Photo and Video Gallery
- Feedback option
- Tracking facility for job-applicants, students, seeking admissions, RTI Applicants, grievance redressal etc.

### **F. Content Management System**

- The entire website of IISER TIRUPATI is to be managed by a comprehensive Content Management Service (CMS) framework for regularly updating the information, publishing/un-publishing webpages etc. This CMS shall be accessible through a web browser.
- Enhancement/Maintenance of the existing CMS shall be in Bidder's scope. Addition of new feature / modification of existing features shall be incorporated as per the instructions of IISER TIRUPATI.
- Dynamic Menus - Menus and submenus should be created based on the page- tree as pages are added and subtracted. These should be styled entirely through CMS.
- User Privileges - An administrator can grant as little or as much control to content editors or groups as needed. Individual departments of the organization shall do the content management of the website/publishing of content on website and the administrator shall give necessary roles, maker/checker access to them for publishing of respective content on website.
- Rich Text Editor – The CMS should have Rich Text Editor embedded so that CMS user can host/edit HTML pages with minimal efforts.

- Addition / Deletion / Change /Upgradation of Menu item(s) / Submenu item(s) / Content(s) shall be provided as a workflow application.

### **G. Browser Compatibility**

- The website shall be compatible with all the major web browsers like Internet Explorer, Microsoft Edge, Google Chrome, Mozilla Firefox, Safari, Opera etc. The mentioned names are just illustrative and not exhaustive.
- The website should be compatible with the versions mentioned below and higher for the following web browsers:

Sl No	Browser	Version
1.	Internet Explorer	IE 8
2.	Microsoft Edge	12
3.	Google Chrome	59
4.	Firefox	18
5.	Safari	6
6.	Opera	38

### **H. Other Conditions**

- Enhancements may require technical changes in CMS (that may require code change) which shall also be managed by the bidder.
- Sending alerts through Email, SMS etc. For sending email and SMS, email and SMS gateway would be provided by IISER TIRUPATI.
- All content and media in the website will be copyrighted material of the owner i.e. IISER TIRUPATI.
- The website should be developed with master header and uniform content pages, so that font, font size, color and other cosmetic appearances should be uniformly maintained throughout the website.
- Support for maintenance and availability of website shall be in bidder's scope on 24 x 7 x 365 basis. Provision for helpdesk and technical support on telephone and email on 24 x 7 x 365 for all maintenance related issues regarding website is to be provided.
- The website structure may change as per IISER TIRUPATI's requirements.
- The bidder should provide a single point of contact for all issues regarding website.
- Mapping of IISER TIRUPATI's registered domain name with website shall be in the scope of bidder.
- The bidder should store and track version of content which should have the facility to roll back to previous versions, if needed. Also, any update made in any content should be date tracked and date of updation should be displayed in right bottom corner of the content page which is updated. facility to review the content is required before the actual publication of the same.





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- The Bidder has to share the complete source code of the product with IISER Tirupati.
- All Material/Product & related codes would be the property of IISER Tirupati and service provider would have no claim over the same in future.
- Entire content should be stored and kept confidential and Bidder should not replicate/ reuse / transfer the same to anyone else.
- Bidder should provide all admin/ User manuals along with complete training to IISER Tirupati.
- Bidder should provide full support for all future upgrades/ installations of IISER Tirupati related to Website, at no additional cost.

The prospective website designers /dealers must give their presentation of similar works done earlier and their roadmap (demo) for their development vision of IISER Tirupati website to the Committee on the date of Pre-indent conference at IISER Tirupati.

ADDRESS:

**IISER Tirupati**

Transit campus  
Sree Rama Engineering College Campus,  
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Mangalam (B.O), Tirupati - 517 507  
Ph. 0877 2500 400  
Email: [purchase@iisertirupati.ac.in](mailto:purchase@iisertirupati.ac.in)

Date and Time of the pre-indent conference: 28<sup>th</sup> February, 2020 at 03:30 PM

Note: This notice is issued to those firms who are dealing with the above mentioned Stationery Items for “Expression of their Interest” to participate in preparation of specification and thereafter in bidding process.

Sd/-  
Assistant Registrar ( S&P)