

A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN(A)

Affiliated to Adikavi Nannaya University

Jagannaickpur, Kakinada.

DEPARTMENT OF COMPUTER SCIENCE



BEST PRACTICES

**Promoting self-sustainability through
MOOCs**

A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)

JAGANNAICKPUR, KAKINADA.



DEPARTMENT OF COMPUTER SCIENCE

Best Practice: Promoting self-sustainability through MOOCs

Objectives of the Practice

The primary objective of promoting self-sustainability through MOOC (Massive Open Online Course) certifications is to encourage continuous learning and skill enhancement among students. This practice aims to expose students to globally recognized courses from leading platforms such as CISCO, Coursera, edX, Udemy, Infosys Springboard and NPTEL, thereby fostering self-learning habits. The intended outcomes include enhancing students' technical and non-technical skills, improving their employability, and making them competitive in the global job market. The underlying principle is to cultivate a culture of self-sufficiency, lifelong learning, and knowledge upgradation to keep pace with the rapidly evolving industry trends.

The Context

In the current educational landscape, traditional classroom learning often falls short of providing students with the latest industry-relevant skills and global exposure. The increasing demand for specialized technical skills and practical knowledge in emerging fields like Artificial Intelligence, Data Science, Blockchain, Cybersecurity, and IoT created a need for self-paced learning platforms like MOOCs.

Challenges faced in implementing the practice were:

- Limited Exposure to Global Learning Resources: Students had minimal exposure to global educational resources and learning methodologies.
- Skill Deficiency in Emerging Technologies: Many students lacked skills in trending technologies that are highly demanded in the job market.
- Low Self-Learning Habits: A significant number of students depended solely on classroom learning and lacked the initiative for self-directed learning.
- Bridging Industry-Academia Gap: The need to align students' knowledge with global industry standards was critical.

By addressing these contextual challenges, the department aimed to promote a culture of lifelong learning, self-sustainability, and competitive skill development among students.

The Practice

The practice of promoting self-sustainability through MOOC certifications revolves around encouraging students to take up online courses from reputable platforms and helping them stay updated with emerging technologies. This practice follows a structured approach as outlined below:

1. Guidance and Recommendations:

The department plays an active role in guiding students to choose the right MOOCs that align with their career aspirations. Faculty members continuously research trending technologies and emerging fields, recommending high-quality courses from platforms such as:

- CISCO Certifications and faculty were Certified CISCO Netacad Instructors
- Coursera for Data Science, Cloud Computing, and AI/ML courses.
- edX for courses from reputed universities like MIT, Harvard, and Stanford.
- NPTEL/SWAYAM for government-certified courses in various domains.
- Udemy for practical, hands-on technical skills like programming, web development, and digital marketing.
- Infosys Springboard for recent advancements in technologies

2. Recognition and Motivation:

To recognize the efforts of students who complete MOOC certifications, the department introduces a reward and recognition mechanism such as:

- Certificate Display: Students' MOOC certificates are displayed on departmental notice boards or official websites.
- Appreciation in Departmental Meetings: Students are appreciated publicly during departmental meetings or events.

3. Study Groups and Peer Learning:

To promote collaborative learning, students are encouraged to form study groups for collective learning. The department facilitates:

- Discussion Forums: Where students can share insights, challenges, and solutions while pursuing MOOCs.
- Peer Mentoring: Senior students or alumni who have completed similar courses act as mentors to guide juniors.

4. Tracking and Monitoring:

The department keeps track of students who enroll and complete MOOCs. Faculty members conduct follow-up sessions to ensure:

- Students are completing their courses within the stipulated time.
- Knowledge acquired from MOOCs is implemented in academic projects, internships, or technical competitions.
- Encouragement to pursue further certifications relevant to their career aspirations.

5. **Linking with Career Opportunities:**

The certifications obtained through MOOCs are directly linked to improving students' employability.

Uniqueness in the Context of Indian Higher Education:

- This practice significantly shifts the learning paradigm from a faculty-driven model to a self-learning model.
- It empowers students to take ownership of their learning journey and build industry-relevant skills beyond traditional curriculum boundaries.
- Unlike regular classroom learning, MOOCs provide exposure to global teaching methods, international faculty, and real-world problem-solving, setting students apart in competitive job markets.

Constraints/Limitations:

- **Limited Access to Paid Courses:** Some students face financial limitations in accessing premium MOOCs that require payment for certification.
- **Internet and Infrastructure Issues:** Students from remote locations sometimes face internet connectivity issues, limiting their ability to access courses.
- **Time Management:** Balancing regular academic curriculum with additional MOOC learning was initially challenging for some students.

Evidence of Success

The success of promoting self-sustainability through MOOC certifications is evident through tangible and measurable outcomes as outlined below:

1. **Increased Course Completion Rates:**

A noticeable increase in the number of students completing MOOC certifications has been observed over the past few semesters. More than 60% of students have completed at least one MOOC course annually. Some students have earned multiple certifications across diverse fields.

2. **Enhanced Employability:**

Several students have successfully secured job placements in top companies by showcasing their MOOC certifications during job interviews. The added certifications significantly enhanced their resumes, making them competitive in the job market.

3. **Skill Development in Emerging Technologies:**

Students who completed MOOCs in advanced domains like Artificial Intelligence, Blockchain, Cybersecurity, and Cloud Computing demonstrated superior technical skills and innovative thinking during academic projects, internships, and job interviews.

The results indicate that students are becoming self-sustainable learners, well-equipped with industry-relevant skills, and capable of navigating the fast-paced technological world.

Problems Encountered:

1. **Student Reluctance:** Initially, students showed reluctance in enrolling for MOOCs due to unfamiliarity with online learning platforms. Faculty had to conduct orientation sessions to promote the benefits of MOOCs.
2. **Time Constraints:** Managing time between regular academics and MOOC learning posed a challenge for some students. Faculty intervention was required to guide students on time management.
3. **Lack of Access to Paid Courses:** Some students could not afford paid certifications from platforms like Coursera, limiting their access to certain high-quality courses.

Resources Required:

1. **Institutional Support:** The institution can consider partially or fully funding high-quality certification courses for economically weaker students.
2. **High-Speed Internet and Infrastructure:** Ensuring that students have access to reliable internet connectivity and computer labs for MOOC learning.
3. **Dedicated Mentorship Programs:** Establishing a structured peer-mentoring or faculty-mentoring program to provide constant support to students pursuing MOOCs.
4. **Recognition and Rewards:** Institutional-level recognition in the form of certificates, awards, or cash prizes to further motivate students to complete MOOCs.

This comprehensive report highlights the effectiveness of promoting self-sustainability through MOOC certifications in enhancing students' knowledge, technical skills, and employability. It also demonstrates the growing acceptance of self-paced learning in bridging the gap between academic learning and industry expectations.

Get Connected

For completing the Cisco Networking Academy® Get Connected course, and demonstrating the ability to do the following:

- Identify different types of computer systems, internal components and external devices.
- Understand the structure of the directories in Microsoft Windows, and how to work with files and folders using a text editor.
- Understand computer networks, as well as browse and search the Internet, and use email.
- Create and use various types of social media accounts, including Facebook, LinkedIn and YouTube.
- Identify common problems and implement simple solutions for hardware, software and networks.

MADHURI KAARE

Student

A.S.D. Government Degree College for Women (Autonomous), Kakinada

Academy Name

India

Location

17 Feb 2021

Date


Laura Quintana

VP & General Manager, Cisco Networking Academy

Student course completion certificate offered through CISCO Networking Academy

PCAP: Programming Essentials in Python

During the Cisco Networking Academy® course, administered by the undersigned instructor, the student has studied the following skills:

- the universal concepts of computer programming (i.e. variables, flow control, data structures, algorithms, conditional execution, loops, functions, etc.)
- developer tools, developer tools and the runtime environment;
- the syntax and semantics of the Python language;
- the fundamentals of object-oriented programming and the way they are adopted in Python;
- the means by which to resolve typical implementation problems;
- the writing of Python programs using standard language infrastructure;
- fundamental programming techniques, best practices, customs and vocabulary, including the most common library functions in Python 3.

This Statement of Achievement acknowledges that during the course PCAP: Programming Essentials in Python, the student has been able to accomplish coding tasks related to the basics of programming, and understands the programming techniques, customs and vocabulary used in the Python language.

By completing the course, the student is now ready to attempt the qualification PCAP – Certified Associate in Python Programming certification, from the OpenEDG Python Institute.

SUPRAJA KONAGALLA

Student

A.S.D. Government Degree College for Women (Autonomous), Kakinada

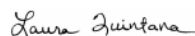
Academy Name

India

Location

10 Jul 2021

Date


Laura Quintana

VP & General Manager, Cisco Networking Academy

Activate Windows

Go to Settings to activate W

www.netacad.com | www.pythoninstitute.org

PCAP Course completion certificate offered through CISCO Networking Academy



Course completion certificate offered through Coursera



Students with CISCO CCNA Course completion certificates

CCNAv7: Bridging

The student has successfully achieved student level credential for completing CCNAv7: Bridging course administered by the undersigned instructor. The student was able to proficiently:

- Configure WLANs using a WLC and L2 security best practices.
- Explain how vulnerabilities, threats, and exploits can be mitigated to enhance network security.
- Explain how VPNs and IPsec secure site-to-site and remote access connectivity.
- Explain how network automation is enabled through RESTful APIs and configuration management tools.

ANUSHA YARRAMNEEDI

Student

A.S.D. Government Degree College for Women (Autonomous), Kakinada

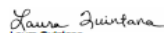
Academy Name

India

Location

3 Mar 2022

Date


Laura Quintana
VP & General Manager, Cisco Networking Academy

CCNA Bridging course completion certificate offered through CISCO



COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Velugubantla Nandini

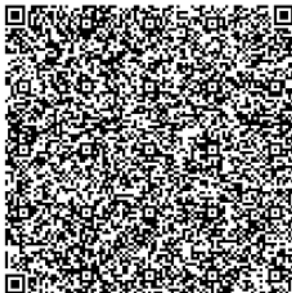
for successfully completing the course

Experiment5 - Voice Controlled Robot - [Skyrim Kit]


on November 20, 2023

Infosys | Springboard

Congratulations! You make us proud!



Issued on: Monday, November 20, 2023



Thirumala Arohi
Senior Vice President and Head
Education, Training and Assessment (ETA)
Infosys Limited

Course completion certificate offered through Infosys Springboard



Students with Infosys Springboard course completion certificates



Students with edX course completion certificates



Students with course completion certificates offered through SOLOLEARN