Admission eligibility

Admission to the Online M. Sc. (CS-FOSS) would be open to those having the following qualifications:

- B.C.A or B.Sc (10+2+3) in any branch of sciences or mathematics, with at least one paper in mathematics at the degree level.
- B.E./ B.Tech. (in any branch)

Admissions are normally held twice a year, around Feb-March and Aug-Sept, and is open to students from all over the country. The medium of instruction would be English, and the candidates are expected to have adequate proficiency in the written and spoken forms of this language.

Computing and Internet resource requirements

Candidates admitted to the program would be required to have unlimited access to the following Desktop or Laptop facilities:

- Hardware specifications higher than: Pentium 4 @ 500MHz, 300GB Hard Disk, 512 MB RAM, 64MB video memory, 16 bit Sound Card, Speakers & Mike or headphones, Web camera.
- Software specifications typical: Linux (Fedora version 15 or similar) OS, Open Office Suite, PDF reader like Adobe, Firefox or Netscape Browser, and any other FOSS SW packages as required for the program.
- Internet connection speeds: 1Mbps or more.

The Coordinating Centre would provide necessary assistance to the enrolled candidates in the downloading and installation of all the FOSS packages relevant to the study program on their machines.

Workload Estimate

Every course for which a candidate has registered would require about 10-12 hours of work per week from him/her. Attempting to take up and complete all the courses prescribed for a semester in the first attempt itself so that the program can be completed within the minimum prescribed period of four semesters, would therefore need the candidate to put in about 30-60 hours of work per week -- amounting to 'full time' commitment. Those who may not be able to commit full time for this study and would instead prefer taking up this program on a part-time basis can use the "flexible-pacing facility" available in this Program. Under this option, the candidate can take more than four semesters to complete the program without incurring any academic penalty, but with in the maximum permitted time of twelve semesters. The Coordinating Centre would provide the necessary counseling in this regard on request.

Contact Addresses:

The Director
Centre for Distance Education
Anna University
Sardar Patel Road
Chennai – 600025
Ph. 044-2235 7216
Email: distanceprog@annauniv.edu
URL: http://cde.annauniv.edu/

The Coordinator
Education & Training Programs
AU-KBC Research Centre
M. I. T. Campus of Anna University
Chromepet, Chennai – 600044
Ph. 044-2232711
Email: mscfoss@au-kbc.org
URL: http://mscfoss.au-kbc.org.in/

The Coordinating Centre
AU-KBC Research Centre
MIT Campus of Anna University
Chromepet, Chennai – 600044
(www.au-kbc.org)
The Background

The manner in which the science of computing is being utilized by the Software and IT industry has been seeing dramatic changes in recent years. The Net, the Web, Mobility etc are the very life breath of the new information industry, and the manner in which new technologies, products and applications are being developed and deployed depend heavily on the processes of collaboration, distributed team work, sharing, reuse, openness, scalability, community-driven processes, user-feedback, etc.

The Free/Open Source Software (FOSS) Movement that has altered the field of computing in many fundamental ways is a key driver of these changes. The Free/Open Source Software (FOSS) Movement that has altered the field of computing in many fundamental ways is a key driver of these changes being witnessed in today’s information industry, as embodied in Web 2.0, Mobile Computing, Cloud Computing, Embedded/ Real-time Computing, Geospatial Computing etc. In addition to contributing Products, Technologies and Solutions that are at the very cutting edge of today’s information industry, FOSS has also impacted strongly on the approaches, processes and methods of developing and delivering SW/IT products and services of ever increasing sophistication and affordability.

Unfortunately, this ongoing revolution in the world of practical computing does not find much reflection in the curricula, syllabi, methods and processes of Computer and IT Education in our country – one of the eventual consequences of this being that our SW/IT graduates are far from being ‘industry-ready’. If our graduates have to be good enough for today’s (and tomorrow’s) world of computing, and if we need to do so in numbers running into millions, then it would need a dramatic shift in the paradigms, approaches, processes, techniques and tools of teaching-learning in the filed of Software and IT. And given the critical importance of the SW/IT domain in the nation’s Industry and Economy, India has to pioneer this shift with bold experimentation and innovation in the field of computer science education so that we as a nation can build on the strengths we have acquired in this field globally.

Launching of the two-year Online M.Sc. (Computer Science – Free/Open Source Software) Program by Anna University Chennai under its Distance Education Department (http://cde.annauniv.edu/Default.aspx) represents one such pioneering step. Motivation and support for this initiative have also come from the NRCFOSS Project (http://nrcfoss.org.in/) funded by the Dept. of Inf. Tech., Ministry of Communication and Information Technologies, Govt. of India, and coordinated by C-DAC Chennai, of which Anna University has been a participating institution since its inception.

The objectives of the M.Sc. (CS-FOSS) Program

Within the broad context mentioned above, this Online Program has goals and objectives that include the following:

• Evolve an affordable mode of imparting quality SW/IT Education at the university level that can scale with the future needs of the industry and society in a cost effective manner.

• Train the students formally in the philosophy, approaches, methods, technologies, tools and solutions of FOSS so that they can bring in innovation and creativity into the industry, leading to quality IT products and solutions that are affordable to the masses. The program would help address the needs of the Industry and Government for manpower well trained in FOSS.

• Impart SW/IT knowledge and skills to large numbers of students with out sacrificing quality by the use of effective online, web-based and interactive processes and techniques that are already in use world wide.

• Impart a high level of ‘industry readiness’ to the students by basing all teaching and learning on the use of proven real world products, technologies, processes and standards from the FOSS domain – the learning environment that the students see will not be fundamentally different from the industry environment as far as the SW packages and tools used are concerned.

• Realise and deploy all parts of the Online Program (content creation, content delivery, inter-activity, evaluation etc) using available FOSS products and solutions so as to make the program itself a powerful demonstration of the maturity of today’s FOSS technologies and products.

• Provide an opportunity to non-SW/IT graduates, including working people from all over the country, to acquire a SW/IT degree from a reputed university in a flexible manner. SW/IT industry could also use this program to equip their engineers with specialised FOSS skills without having to send them away to the class rooms.

Despite the strong emphasis on FOSS, it is expected that the graduates of this program would fit into the broad needs of the Indian SW/IT market like the BE’s, B.Tech’s, MCA’s etc. coming out of the regular programs.

Some details of the Program

The Online M. Sc. (CS-FOSS) program shares many features of the regular M. Sc. (CS/IT) programs in terms of the structure, regulations, curricula, syllabi, theory courses, laboratory classes and project work, continuous internal evaluation, end-semester examinations, etc. The candidates would have to successfully complete around 16-18 Courses (theory and laboratory) and a Project work, over a minimum duration of four semesters (two years). Like in other similar programs, there will be one or two textbooks on which each course syllabus is based, supplemented with additional reference materials. For each course, live online classes will be conducted twice a week by a Teacher/Mentor using slides and synchronized audio, and the students can interact with the teacher in real time during these classes using audio. Students are expected to be logged into these classes from their computers in real time, and a minimum attendance in these virtual classes is mandatory. Interaction would also take place between the teacher and the class, as well as amongst the members of the class, through chat sessions, e-mail, sms, conferencing, etc. All the students registered for a course during one semester would in fact constitute a closely interacting ‘community’ in the FOSS sense, and a significant amount of learning is expected to happen in the community mode. The final year project in particular will be carried out following many of the principles and practices of the SW development methodology followed in the FOSS world.

There will be regular processes of laboratory classes, assignments, reports, quizzes, tests etc. conducted online by the Teacher/Mentor, based on which ‘sessional marks’ will be awarded for each individual student.

Examining the candidates will be carried out following many of the principles and practices of the SW/IT industrial practices. Content Creators and Mentors for the courses taught in the Program would be experienced FOSS experts and practitioners drawn from the national FOSS Community, Academia and Industry. The NRCFOSS network is expected to aid in this significantly.

Further details can be seen at the websites of the programs:
http://cde.annauniv.edu/onlinemsc.xxx


It is well known that the effectiveness of all distance learning programs including the online ones, depend significantly more on the learning process rather than on the teaching process, and hence the student’s motivation and keenness is the key factor that will decide the benefits he/she is likely to derive from the Online M. Sc. (CS-FOSS) Program.

The Coordinating Centre

Being a purely on-line one, the M. Sc. (CS-FOSS) Program under the Distance Education Department of Anna University would not have any Study Centres, but would be coordinated by the AU-KBC Research Centre of the University functioning from the M. I. T. Chromepet Campus of the University (http://ftacademy.org/). The AU-KBC Centre has initiated the NRCFOSS (National Resource Centre for FOSS) Project of the DIT, Govt. of India, in 2005 jointly with C-DAC Chennai, and is presently executing the Phase-II of the same along with several other institutions in the country. As a part of the NRCFOSS Project, the AU-KBC Centre has been involved in promoting FOSS in the higher education sector in the country (http://www.nrcfoss.au-kbc.org.in/), and the proposal to start the Online M.Sc. program in FOSS is partly an outgrowth of this initiative. Through the involvement of the NRCFOSS/AU-KBC Centre, the Online Program will also be receiving appropriate academic and technical participation and support from the other institutions participating in the nationally coordinated NRCFOSS Project. FOSS being an essentially global movement, academic and intellectual collaboration and support for Anna University’s program is also expected from the global FOSS Community as well, such as the Free Technology Academy (FTA) of Europe (http://fasacademy.org/).

The Online M.Sc. program being launched would benefit significantly from the strong presence that the Coordinating Centre already has in the areas of FOSS Education, Technology Promotion and Networking, as well as in imparting skill-based learning in diverse fields.