F20NA Network Applications

**COURSE DETAILS**

Course Code: F20NA

Full Course Title: Network Applications

SCQF Level: 10

SCAF Credits: 15

Available as Elective: No

**DELIVERY LEVEL**

Undergraduate: Yes  Postgraduate Taught: Yes  Postgraduate Research: No

**COURSE AIMS**

- To impart knowledge and understanding of the theories, principles and protocols underlying the primary network applications on the Internet
- To develop the ability to appreciate critically the range of network application technologies and standards
- To give students significant development skills in a range of the principal network technologies, to grasp the main design and practical issues faced in their application, and confer the ability to select and apply relevant techniques for a given network application development problem.
- To have students creatively develop in teams a substantial network application involving web and application server technologies to an original design of their own

**LEARNING OUTCOMES – SUBJECT MASTERY**

- Extensive, detailed and critical knowledge and understanding of the theories, techniques and principles underlying the design of network applications and the range of their application
- Theoretical and practical knowledge of the major network application types including email, web and chat applications and services
- Critical awareness of protocols and standards underlying key network applications especially the web and of enabling technologies for network applications such as sockets, DNS, XML
- Ability to design and develop useful network applications including web, email and chat software using apt technologies and languages: HTML, XML, JavaScript, CSS, Java applets, CGI, servlets, active web server pages, REST web services etc. to professional standards

**LEARNING OUTCOMES – PERSONAL ABILITIES**

- Skills in selecting, applying and evaluating apt technologies in a professional way given a problem requiring network interaction
- Ability to build on initial skills and knowledge by independent research using online resources
- Showing initiative, creativity and team working skills in shared network application development

**SYLLABUS**

Network services - Internet, DNS, sockets, services; e-mail - MIME, SMTP, POP, IMAP; web protocols - URIs, HTTP; web content - HTML, XML, XHTML, HTML5, CSS; web client programming - JavaScript, DOM, CSS3, DHTML; web server programming - CGI, servlets, SSI, JSP, PHP; web security - cookies, HTTP logins; textual conferencing - IM, IRC, implementing web chat; web services in XML - AJAX, SOAP, REST.
**COURSE RELATIONSHIPS**

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<th>Course Code</th>
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<th>Title</th>
<th>School</th>
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<td>Software Development 2</td>
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<td>F28WP</td>
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<td>Web Programming</td>
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**LOCATION AND ASSESSMENT METHODS**

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Re-assessment is only for postgraduate students