CENTRAL BOARD OF SECONDARY EDUCATION

(An Autonomous Organisation under the Ministry of Human Resource Development Govt. of India)
"Shiksha Sadan", 17, Rouse Avenue, Institutional Area, ITO, New Delhi 110002

No. AEO (V&E)/CBSE/2011   Circular No. 08/11
3rd February 2011

All Heads of Institutions
Affiliated to CBSE.

Subject: **Introduction of Geospatial Technology, Food Production, Food & Beverage Services, Mass Media Studies and Media Production as Competency based vocational courses at Senior Secondary level.**

Dear Principal,

As you are aware, the Central Board of Secondary Education (CBSE), keeping in view the acute shortage of trained professionals and development of employability skills among the students, has been offering a number of courses under vocational Education at Senior Secondary level. In recent years, the CBSE has started collaborating with various industries/ institutions for introducing competency based joint certification courses as per the present needs of society and the relevant industries.

In pursuance to this policy of exploring the new domain of knowledge and skills that have bright employment prospects as well as career opportunities, the Board has introduced the following new Vocational courses at senior secondary level.

     1. Geospatial Technology.

     2. Food Production (Hospitality and Tourism)

     3. Food and Beverage Services(Hospitality and Tourism)

     4. Mass Media Studies and Media Production.

The aforesaid courses were introduced in few selected schools in class XI from the Academic Session 2010-11 on pilot basis. Based on the feedback received from the Pilot

schools and on the basis of overwhelming response from the other independent schools, the Board has decided to open it to all affiliated schools in the country and abroad form the academic session 2011-12 for class-XI. The detailed objectives and the salient features of such courses are enclosed at Annexure-I to III.

The schools that are interested in introducing those new courses in class-XI from the academic year 2011-12 may fill in the proforma enclosed at Annexure-IV and may forward to " Sh. S.K. Jena, Asstt. Education Officer (Voc & Edusat), CBSE, Shiksha Sadan,17, Rouse Avenue, New Delhi-110002 on or before 5th March 2011 or Email to cbse.edusat@rediffmail.com copy to skjena.cbse@gmail.com The letter of willingness in Annexure – IV should reach by 5th March 2011 to enable the Board for processing the applications further.

Yours sincerely,

(Shashi Bhushan)
Director (Voc & Edusat)
& Director (Academic)

Copy to:

1. All the Members of the Governing Body, CBSE.
2. The Commissioner, Kendriya Vidyalaya Sangathan, 18-Institutional Area, Shaheed Jeet Singh Marg, New Delhi-110 016.
3. The Commissioner, Navodaya Vidyalaya Samiti, A-28, Kailash Colony, New Delhi.
4. The Director of Education, Directorate of Education, Govt. of NCT of Delhi, Old Secretariat, Delhi- 110 054.
5. The Director of Public Instructions (Schools), Union Territory Secretariat, Sector 9, Chandigarh-160 017.
6. The Director of Education, Govt. of Sikkim, Gangtok, Sikkim – 737 101.
7. The Director of School Education, Govt. of Arunachal Pradesh, Itanagar-791 111.
8. The Director of Education, Govt. of A&N Islands, Port Blair-744 101.
9. The Secretary, Central Tibetan School Administration, ESSESS Plaza, Community Centre, Sector 3, Rohini, Delhi-110 085.
10. All the Regional Officers of CBSE with the request to send this circular to all the Heads of the affiliated schools of the Board in their respective regions.
11. The Education Officers/AEOs of the Academic Branch, CBSE.
12. The Joint Secretary (IT) with the request to put this circular on the CBSE website.
13. The Library and Information Officer, CBSE
14. EO to Chairman, CBSE
15. PA to Secretary, CBSE
16. PA to CE, CBSE

17. PA to Director (Spl. Exam.)
18. PA to Director (Edusat)
19. The PRO, CBSE

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Director (Vocational & Edusat)
& Director (Academic)

<u>Annexure - I</u>

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A. GEOSPATIAL TECHNOLOGY

In recent times, there is a strong public perception for imparting knowledge on Geospatial Technology due to emerging growth of Geodatabase creation and spatial information analysis. The economy requires huge manpower equipped with relevant skills to manage in the Geospatial and remote sensing technology. The increasing use of fully automated methods of spatial data collection to ensure spatial accuracy, continuing developments in scanning technology and increasing availability of spatial data in various digital forms are making Geospatial Practices increasingly attractive to organizations of all kinds. Geospatial Practices is widely functional in everyday life by many of the services we rely on.

Indian Geospatial Market is on the edge of remarkable growth. Companies are bagging projects that are valued more than the total annual revenue of company. Demand for Geospatial Practices has skyrocketed over the past few years. By linking geographic data with demographic information and business intelligence, organizations are finding new uses for Geospatial Practices. This needs huge trained manpower requirements from Geospatial Industries by both private and public organizations of all sizes, which have generated more demand for Geospatial professionals. This course offers an opportunity for the students to understand the basics of geospatial technology dealing with mapping and applications. Students obtain insight into geospatial database concepts, creating and implementing databases, GIS theory, supported by extensive practical exercises, spatial analysis (network and surface operations) and developing Geospatial Practices skills. The present curriculum would help a large number of youth to acquire skills for further studies and to enter the world of professional work for their decent livelihoods and for economic growth of the country.

"**Geospatial Technology" is offered as single vocational elective** in class XI and XII. The students can opt it as an elective with any other combination of subjects at senior secondary level or as an **additional sixth subject** as per the scheme of studies of the Board.

SALIENT FEATURES OF THE COURSE

The main objective is to introduce Geospatial Practices at secondary level for the growing need of GIS in the country.

The specific objectives of the course are:

1. To build geospatial skills in students to create Geodatabase and mapping.

2. To provide practical understanding of Geospatial technology which includes Remote sensing, Photogrammetric and Geographic Information System.

3. To provide latest knowledge on GIS Architecture, Geospatial Database and Geospatial Analysis.

4. To provide unique platform and opportunities to get involved in the process of the projects and applications.

5. The curriculum has been designed by eminent experts from relevant industries in the field. The basic academic ingredients required to attain this quality are incorporated in the syllabus. The textual material has been prepared by subject experts drawn from different fields and published by the CBSE.

6. The course will have the following subjects at classes XI & XII

   Class XI – Geospatial technology I   (Code No. 740)

   Class XII – Geospatial Technology II (Code No. 740)

On completion of this course students can create maps, geospatial databases and integrate this information for various applications like Navigation, Urban Planning, Administrative planning and Web GIS.

7. The Board will undertake training of teachers both for theory and practical in collaboration with Rolta India Limited, Mumbai. However, the Qualification of the teacher to teach the subject are-

1. **TEACHING FACULTY**

   a) Full Time Teacher

   b) Part Time Teachers (Drawn from the industry/relevant fields)

2. **QUALIFICATIONS**

   Full Time Teachers

   a) Essential

   - Post Graduates with Science / Maths / Geography / Computer Sciences/IT

   b) Desirable

- Bachelor of Education or teaching degree from recognized University/ Institution

- Having knowledge of GIS and Remote Sensing.

Part Time teachers

- Practical Trainers duly trained by organizations dealing in Geospatial Practices. Or trainers should be from Rolta with minimum of 2 years experience in the field.

8. The course can be started in Class XI from the academic year 2011-12.

9. Infrastructure requirement: - "The school should have sufficient computers with Software (Image processing SW and GIS SW for Class XI), internet facility to introduce this course. However, the selected schools offering such course will be provided the relevant software i.e. (Geometrica) free of cost by Rolta India Limited, Mumbai.

Lab Setup for Image Processing, GIS & Digital Photogrammetric

1   **Computer System Configuration**

- Hard Disk Capacity : 160 GB
- RAM : 2GB
- Graphic Card: NVIDIA quadro FX 4500
- Processor Speed : 3GHz
- Pentium 4
- OS Windows XP

2   **Hardware Configuration**

- IBM 19" CRT Monitors
- LAN connection
- Mouse : 2D Mouse.

3   **Software required**

- R Imager – Image Processing Software
- R GIS – GIS Software
- R Mapper – Photogrammetric Software
- R GSF– Geospatial Fusion Web GIS

4   **Data Sets**

- Digital Images : IRS LISS III P6, IRS P, SPOT, IKONOS, Quick Bird, Carto SAT (15'x15') Archival data
- Scanned Top sheets covering the same area in digital images on 1:50,000 scale.
- Satellite images : Hard copy of IRS P6 LISS III & PAN, SPOT and scanned Top sheets covering the same area in digital images
- Analog Stereo Pair of Aerial Photographs (23 x 23 inches) Coloured and scanned Top sheets covering the same area in digital images
- Digital Stereo Pair – IKONOS, Quick Bird, Carto SAT III and scanned Top sheets covering the same area in digital images
- Earth Globe, 3D Physiographic Map of India

B. FOOD PRODUCTION, FOOD & BEVERAGE SERVICES (HOSPITALITY AND TOURISM)

India's hotel industries is the second largest in the Asia-Pacific region. It is expected that hospitality industry in India is projected to grow at a rate of 8.8 per cent during 2007-16, placing India as the second-fastest growing tourism market in the world. The tourism industry in India is substantial and vibrant, and the country is fast becoming a major global destination. India's http://www.economywatch.com/business-and-economy/tourism-industry.html travel and tourism industry is one of the most profitable industries in the country, and also credited with contributing a substantial amount of foreign exchange.

India offers diverse opportunities for tourism. Over 5 million foreign tourists come to India every year. By comparison, domestic tourism is significantly greater. Recent statistics reveal that India is likely to witness a further increase in both domestic and international tourist strength. Annual demand for trained manpower in hotels & restaurants is approximately 2.03 lakh per year. Huge expansions are envisaged in the fast food / café segment as well as the 1 to 3 star budget hotels.

Keeping in view the acute shortage of trained professionals and the emphasis of Government of India on development of employability skills, the CBSE has decided to launch two vocational packages under **"Hospitality and Tourism Sector"** and the packages are **1. Food Production 2. Food and Beverage Services.**

The new course will consist of two vocational subjects each in classes XI and XII. Besides these **two vocational subjects** students will have to take **one language** and **two academic elective subjects** relevant to the field or students can take **two languages** and **one academic elective** besides **two vocational subjects.** The students can also opt for **additional sixth subject** which can **either be a language or an academic elective subject.**

SALIENT FEATURES OF THE COURSE

1. The primary objective of the course is to develop practical **employability skills** in "**Hospitality and Tourism Sector".**

2. The details of two vocational packages are :-

 1. FOOD PRODUCTION (Class XI)

   1) Food Production – I Vocational Subject (Code No. 734)
   2) Food Production – II Vocational Subject (Code No. 735)

3) Language I
4) Language II or Economics (030) or Business Studies (054) or Entrepreneurship (066)
5) Any other Academic Elective
6) Additional (Optional)

Class XII

1) Food Production – III Vocational Subject (Code No. 734)
2) Food Production – IV Vocational Subject (Code No. 735)
3) Language I
4) Language II or Economics (030) or Business Studies (054) or Entrepreneurship (066)
5) Any other Academic Elective
6) Additional (Optional)

2. FOOD AND BEVERAGE SERVICES (Class XI)

1) Food Service – I Vocational Subject   (Code No. 736)
2) Beverage Service – Vocational Subject (Code No. 737)
3) Language I
4) Language II or Economics (030) or Business Studies (054) or Entrepreneurship (066)
5) Any other Academic Elective
6) Additional (Optional)

Class XII

1) Food Service – II Vocational Subject (Code No. 736)
2) Food and Beverage: Cost and Control. Vocational Subject (Code No. 737)
3) Language I
4) Language II or Economics (030) or Business Studies (054) or Entrepreneurship (066)
5) Any other Academic Elective
6) Additional (Optional)

3. The vertical mobility for students pursuing higher education has been incorporated with the provision of CBSE academic subjects including additional subject along with vocational subjects.

4. The curriculum and textual material has been prepared by subject experts from relevant industries in the field.

5. The basic academic ingredients required to attain the quality are incorporated in the syllabus.

6. Infrastructure required: - 3,000 sq. ft. constructed area for establishing laboratories.

7. The students passing out with this course will be awarded joint certificate by Central Board of Secondary Education (CBSE) and National Council for Hotel Management and Catering Technology (NCHMCT) under Ministry of Tourism which will be value addition to the course.

8. The students of this course will have an added advantage in entrance examination for graduate courses in Hotel Management in the Institutes of Hotel Management in the country.

9. The nearest IHM will be mentor institution to help the school opting this course

10. The students passing out with this course will have potential employment opportunities in different hotels and other concerned organisations.

11. Initially the qualified teachers to teach this course may be selected from IHM campus with the consultation of NCHMCT.

Successful students of the two vocational streams, who wish to make career in hospitality, would be able to find ready employment in this sector at skill level. The National Council for Hotel Management, which is the professional body for the joint certification, has national as well as international recognition and is synonymous with imparting quality hospitality education through its institutes of hotel management. Vocational students of CBSE stand to gain through this joint program with the vast array of jobs.

C. MASS MEDIA STUDIES AND MEDIA PRODUCTION

Mass Media Studies and Media Production is one of such fields which is attracting a lot of young people these days because of such interesting career options in the fields, like various kinds of Media News Papers, Magazines, Video, Television, Advertisement and Public relations etc.

The Board has started this new package on Mass Media Studies and Media Production as an academic elective as well as vocational package in collaboration with Whistling Woods International Limited (WWIL), Mumbai for technical support and teachers training.

The new course will consist of two vocational subjects each in classes XI and XII. Besides these **two vocational subjects** students will have to take **one language** and **two academic elective subjects** relevant to the field or students can take **two languages** and **one academic elective** besides **two vocational subjects.** The students can also opt for **additional sixth subject** which can **either be a language or an academic elective subject.**

Salient features of the course.

1. The primary objective of the course is to develop employability skills among the students in the field of (Film & Media).

2. The details of two vocational packages are –

   Class XI

   a. Understanding the Evolution and Forms of Mass Media – I
   b. The Creative and Commercial Process in Mass Media –I

   Class XII

   a. Understanding the Evolution and Forms of Mass Media – II
   b. The Creative and Commercial Process in Mass Media –II

3. Besides these two vocational subjects, students will have to take one language and two academic electives subjects such as Multi Media and Web Technology (067) or Fashion Studies (053) or Entrepreneurship (066) or any other academic elective of the Board.

4. Students can also opt for additional six subjects such as Fine Art or Music or Dance or any other electives.
5. The vertical mobility for students pursuing higher education has been incorporated with the provision of CBSE academic subjects including additional subject along with vocational subjects.
6. The curriculum and textual material has been prepared by subject experts from relevant industries in the field.
7. The basic academic ingredients required to attain the quality are incorporated in the syllabus.
8. Infrastructure required:

   a. Computers – an ideal ratio of 1 Computer for every 5 Students, the specifications can be :

      - PCs or i Macs with a minimum of 2 GB RAM and 200 GB HDD with dual core processors.

      - Appropriate editing / sound software's most of which are freely available.

   b. The computers, ideally, should be on a UPS or a backup power so as to not damage them in case of power failures.
   c. Handicams / Hand-held video cameras with a ideal ratio of 1:10 (1 camera for every 10 students.).
   d. A screening room equipped with a television set or projector and speakers for playback of video OR screening images through a computer.

9. The students passing out with this course will be awarded joint certificate by Central Board of Secondary Education (CBSE) and Whistling Woods International, Mumbai.
10. The students passing out with this course will have potential employment opportunities in different Medias, News Papers, Magazines, Video, Television, Advertisement and Public relations etc.

Successful students of the vocational stream, who wish to make career in media and journalism would be able to find ready employment in this sector at skill level. The Whistling Woods International, Mumbai which is the professional body for the joint certification, has national as well as international recognition and is synonymous with imparting quality media education through its esteemed institution. Vocational students of CBSE stand to gain through this joint program with the vast array of jobs.

Central Board of Secondary Education
17,Rouse Avenue, New Delhi-110002

Introduction of competency based vocational Courses-2011

(Geospatial Technology, Food Production, Food and Beverage Services, Mass Media Studies and Media Production.)

1. Name of the Course applied for   :   ....

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2. Name of the school (complete address) :   ....

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3. Name of the Principal   :   ....

   Phone No.   :   ....

   Mobile No.   :   ....

   Email   :   ....

4. Infrastructure

   No. of Students   :   ....

   No. of teachers   :   ....

   Student-teacher ratio   :   ....

   No of classrooms   :   ....

   Books in Library   :   ....

   Total computers in computer labs   :   ....

   Specification of Computers specifically for Geospatial Practices ....

Details of constructed area for : ....
establishing laboratories for Hospitality and Tourism Courses

5. Teachers who will be taking up this course with their qualifications:

Name : ....

Qualification with specialization, if any : ....

....

Phone No : ....

Mobile No : ....

Email : ....

Note :

1. The above document may be mailed to Sh. Shashi Bhushan, Director (Edusat) at cbse.edusat@rediffmail.com with CC to Sh. S. K. Jena, Asstt. Education Officer (Voc & Edusat) at skjena.cbse@gmail.com

2. For any further query you can contact at 011-23220153, 23231067.

3. The completed form in all respects may be sent to the following address latest by 5th **March 2011.**

Sh. S. K. Jena,
Asstt. Education Officer,
Central Board of Secondary Education (CBSE)
Shiksha Sadan,
17, Rouse Avenue
New Delhi – 110002

Signature & Seal of the Principal: ....