

446

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

MINUTES OF THE 446th MEETING OF THE SYNDICATE HELD

ON 25.01.2002

Place of meeting : Administrative Buildings  
Kochi - 682 022

Time : 10.30 a.m.

Members present:

1. Dr N Unnikrishnan Nair (in the Chair)  
Vice Chancellor
2. Dr D Rajasenan
3. Dr K C Joseph, MLA
4. Dr N Chandramohanakumar
5. Prof. M I Savadatti
6. Sri M K Purushothaman
7. Dr Babu T Jose
8. Dr K P Rajappan Nair
9. Prof. M J Jacob
10. Sri K Mohammed Ali, MLA

Also present:

Dr K V Kunhikrishnan  
Registrar

Item No.446.01 Action taken report of the minutes of the 437th meeting of the Syndicate held on 19.05.2001.

The Syndicate noted the action taken reports on the minutes of the meeting of the 437th meeting of the Syndicate held on 19.05.2001 and approved the same.

Item No.446.02 Confirmation of the minutes of the 445th meeting of the Syndicate held on 22.12.2001.

The minutes of the meeting of the 445th meeting of the Syndicate held on 22.12.2001 was confirmed without any emendations.

Item No.446.03 Appointment of Technical Officer (Executive Engineer) - High Court Verdict thereon and further developments - Reporting of.

The Syndicate considered the matter of appointment of Technical Officer (Executive Engineer), Engineering Department in the light of the Verdict of the Supreme Court of India in the Special Leave Petition (SLP No.13584/2000) filed by the University against the Verdict of the Hon'ble High Court of Kerala in O.P.No.24354/98.

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Resolved that Smt P Sathi, Assistant Executive Engineer be appointed as Technical Officer (Executive Engineer) as per rules with immediate effect and to bring a comprehensive report on the implications of the verdict on the reservation policy followed in the University.

(Ad.A)

Item No.446.04 Establishment - Smt Laila Beevi, Selection Grade Typist/Stenographer - Extension of deputation - Reporting of.

The Syndicate noted the action taken by the Vice-Chancellor in sanctioning extension of the period of deputation to Smt J Laila Beevi, Senior Grade Typist/Stenographer, for a further period of one year with effect from 14.09.2000 to the Kerala Lok Ayukta, Thiruvananthapuram.

Resolved that the action taken by the Vice-Chancellor be ratified.

(Ad.A)

Item No.446.05 Establishment - University Librarian - Declaration of satisfactory completion of probation - Dr M D Baby in the post of University Librarian - Regarding.

The Syndicate considered, along with the recommendations of the Standing Committees on Staff and Establishment, the request of Dr M D Baby, University Librarian to declare her period of probation in the post of University Librarian with effect from the F.N. of 02.03.2001.

Resolved that the period of probation in respect of Dr M D Baby be declared to have been completed satisfactorily in the post of University Librarian in the F.N. of 2.3.2001 subject to the disposal of Writ Appeal No.2988/2000 pending before the Hon'ble High Court of Kerala.

(Ad.A)

Item No.446.06 Amendments to Regulations of various courses made by the Academic Council - Approval and fixing of date of effect.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the matter of approving and fixing the date of effect of the following amendments to Regulations of various courses approved by the Academic Council in its meeting held on 24.05.2001.

1. Revised curriculum and scheme of examination, Regulations for pass requirements and the Rules of classification of the P G Diploma in Software Engineering for Engineers.
2. Revised course structure of MCA Degree course as appended.
3. The modified scheme of examination of M Tech Degree course in Opto-Electronics and Laser Technology 2001 as appended.

4. The modified scheme of examination of M Phil course in Photonics 2001 as appended.

Resolved that the above amendments to Regulations of various courses be approved as in Appendix I and the date of effect of the same be 24.05.2001, the date of the Academic Council meeting.

(Conf.)

Item No.446.07 M A Hindi Language and Literature - Revised scheme of examination - Approval of fixing date of effect.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the revised scheme of examinations of M A degree course in Hindi Language and Literature approved by the Academic Council in its meeting held on 13.10.2000.

Resolved that the revised scheme of examinations of M A degree course in Hindi Language and Literature approved by the Academic Council in its meeting held on 13.10.2000 be approved and the date of effect of the same be from 13.10.2000, the date of the Academic Council.

(Conference)

Item No.446.08 B Tech I and II semester examination, June 2001 - Suspected malpractice - Regarding.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the matter of establishing the case of suspected malpractice alleged to have been committed by the following 4 candidates of B Tech I and II semester examinations held in June 2001, and the punishment to be imposed on them, in the light of the Report of Enquiry submitted by the Enquiry Officer on the incident.

- (1) Anand Menon K, Mechanical Engineering
- (2) Anilkumar N P, Mechanical Engineering
- (3) Sanilkumar M V, Mechanical Engineering
- (4) Bidesh Kottassary, Safety Engineering

Resolved that-

1. all papers written by the candidates for the B Tech I and II semester examinations January 2001 be cancelled.
2. further, the four candidates be debarred from writing the next semester examination, viz., III semester examination.

(Examination)

Item No.446.09 Report of the Commission to enquire into the working of CUSAT - Report on the discussions with the service organizations - Consideration of.

The Syndicate considered, the report of the Commission constituted by the Government under the Chairmanship of Prof. Joseph Padayatty to enquire into the working of the University, along with the observations made by the representatives of the teaching/non-teaching staff organizations of the University, and the matter of furnishing the views of the University to the Government.

Resolved that the Vice Chancellor be authorized to send a suitable reply to Government after considering the views expressed by the University community on the recommendations of the Commission.

(Ad.A)

Item No.446.10 Irregularities in the construction of the compound wall for CUGSE (presently School of Engineering) - Report of VACB - Explanation furnished by the officers concerned and the contractor - Further action - Regarding.

The Syndicate considered, along with the recommendations of the Standing Committees on Staff and Establishment, and Finance and Purchase, the explanations furnished by the concerned officers of the Engineering Department and the contractor who have been found guilty by the Vigilance and Anti-Corruption Bureau on the irregularities in the construction of compound wall for CUGSE (presently School of Engineering).

Resolved that-

1. One third of Rs.42,589/- being the loss occurred due to the sub standard construction of the compound wall be recovered from the Supervisor (Smt K U Leeja), the Assistant Engineer (Sri K M Joy) and the Assistant Executive Engineer (Smt P J Sheela) proportionate to their basic pay and two third of Rs.42,589/- be recovered from the contractor Sri K P Jaleel.
2. Warning be given to the following officers of the Engineering Department:
  - (a) Smt P J Sheela, Assistant Executive Engineer responsible for the sub standard construction and check measuring.
  - (b) Sri K M Joy, Assistant Engineer for the lapses of false entries in the measurement book.
  - (c) Smt K U Leeja, Overseer responsible for the substandard materials used for the construction.

3. Rs.34,744/- (9% tender excess from the First Tenderer) from Sri B Sreekumar, First Tenderer by legal means in addition to the forfeiture of his EMD besides blacklisting.

(Ad.A)

Item No.446.11 PAC - Report on the collapse of open air auditorium - Leakage in the DRDO building - Further guidance from the Government - Consideration of.

The Syndicate considered, along with the recommendations of the Standing Committees on Staff and Establishment and Finance and Purchase, the Government direction contained in the letter dated 25.09.2001 relating to the actions to be taken against the University officials (Sri T A Achutha Warriar, retired University Engineer, Sri N T John, Assistant Executive Engineer (Retd.), Smt P Sathi, Assistant Engineer) and the contractor (Sri K K Thomas) based on the PAC report on the collapse of the open air auditorium and leakage in the DRDO building.

Resolved that the matter be referred to the Works committee of the Syndicate for making recommendations in the matter.

(Ad.A)

Item No.446.12 Establishment of a Placement Cell - Regarding.

The Syndicate considered, along with the recommendations of the Standing Committees on Academic Matters, and Finance and Purchase, the proposed organizational structure and activities of the Placement Cell established in the University in order to expand its activities.

Resolved that-

1. A placement cell be established in the University.
2. Sri Joseph Alexander, Reader in Mechanical Engineering, School of Engineering be nominated as the Director of the Placement Cell for a period of 2 years.
3. Sri K B Reghunath, Section Officer be appointed as Information Officer by transfer appointment.
4. Stenographic assistance and the services of one Peon be provided to the Cell.
5. The expenditure in connection with the Placement Cell be met from the self-financings fund of the CES.
6. Advisory Boards be constituted for the placement activities and University-industry linkage, after receiving proposals from the Director.

7. Separate guidelines for all the activities of the Cell be formulated and presented to the Syndicate for approval.

(Ad.A)

Item No.446.13 University senior research fellowship to Sri C Joseph Mathai, Research Scholar, Department of Physics - consideration of award.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the request of Sri C Joseph Mathai, Research Scholar, Department of Physics for extension of the University Senior Research Fellowship for one more year with effect from 06.05.2000.

Resolved that Sri C Joseph Mathai, Research Scholar, Department of Physics be granted extension of the University Senior Research Fellowship held by him for one more year w.e.f.06.05.2000.

(Ac.B)

Item No.446.14 Scheme of examination/Regulations - Approved for.

The Syndicate considered, along with the recommendations of the Standing Committees on Academic Matters, the following decisions taken by the Academic Council in its meeting held on 24.05.2001 relating to schemes of examinations/Regulations of various courses:

1. The action taken by the Vice-Chancellor in having approved the scheme of examination of the B Tech Engineering courses from I to IV semesters be ratified (vide item No.17).
2. To approve the scheme of examination from V to VIII semesters of the B Tech courses in (a) Civil Engineering (b) Mechanical Engineering (c) Electronics and Communication Engineering (d) Information Technology (e) Safety and Fire Engineering (f) Electronics and Biomedical Engineering (g) Computer Science and Engineering (h) Electronics and Instrumentation Engineering (upto IV semester) (i) Marine Engineering.
3. The action taken by the Vice-Chancellor in having approved the BCA Regulations 2000 w.e.f.18.7.2000 be ratified (vide item No.18).
4. To adopt the following resolution:

"Out of the six candidates who could be taken as research students as per the existing para added to Clause 6(1) of the Regulations for Ph D, D.Sc, D.Litt and LLD one could be an eligible candidate from the category of SC/S with award of CSIR/UGC or any of the National Level Fellowships or eligible for availing research grant from Harijan Welfare Department".

Resolved that the above decisions taken by the Academic Council in its meeting held on 24.05.01 be approved and be made effective from the date of Academic Council in cases where the date of effect has not been fixed by the Council. (Conf.)

Item No.446.15 Changes in various parameters of the format of degree certificate to prevent fake certificates and forgery-Implementation of guidelines issued MHRD.

The Syndicate considered, the guidelines issued by the Ministry of Human Resource Development, Government of India, suggesting certain changes on various parameters of the format of degree certificates issued by the University to prevent fake degree certificate and forgery, and the matter of changing the present format of degrees issued by the University in line with the suggestions made by MHRD.

Resolved that the alterations proposed to redesign the format of the degree certificates of Cochin University of Science and Technology be approved.

Further resolved that in the degree certificates awarded for Ph.D., the date of the award (by the Syndicate) be mentioned in future.

(Exam./CE)

Item No.446.16 Creation of essential posts - Policy decision of the State Government in the matter - Consideration of.

This item was withdrawn as its was considered while instituting temporary posts in the last meeting.

Item No.446.17 Purchase of equipments for Strength of Materials and Concrete Lab, School of Engineering, - Centre for Engineering Studies - Regarding.

The syndicate considered, the proposal for purchase of lab equipments required for setting up of the Strength of Materials laboratory proposed by the Head, Department of Civil Engineering School of Engineering.

Resolved that-

1. Equipments as per detailed break-up given in Appendix A be purchased from M/s.Integrated Instruments and Servicing Pvt.Ltd, Kochi-36 for an amount of Rs.6,40,385/- + taxes and other charges.
2. Equipments as detailed in Appendix B be purchased from M/s.HEICO, New Delhi for an amount of Rs.5,08,450/-
3. Equipments as listed in Appendix C be purchased from M/s.Syscon Instruments, Bangalore, Purchase for an amount of Rs.93,000/- + taxes.
4. Equipments as detailed in Appendix D be purchased from M/s.Concord Instruments, Kochi-36, purchase for an amount of Rs.64,240/- + taxes and other charges.
5. Equipments as detailed in Appendix E be purchased from M/s.Hitech India Equipments PVT.Ltd., Chennai, worth Rs.1,06,711/- (rate includes taex and other charges)

Further resolved that the expenditure in this connection be met from the self-financing sector of the University.

The Syndicate considered, the proposal forwarded by the Director, Centre for Engineering Studies for instituting merit scholarships among B.Tech students of each branch of Engineering under the School of Engineering and Cochin University College of Engineering, Kuttanad.

Resolved that the proposal be agreed in principle, and a scholarship of Rs.10,000/- per year each be awarded to two candidates each in all disciplines of B.Tech Engineering course of School of Engineering and Cochin University College of Engineering Kuttanad from the academic year 2001-2002 onwards.

(CES)

Item No.446.22 Scheme of examination/Regulations/Amendments made by the Academic Council - Approval of and fixing date of effect.

The Syndicate considered, along with the recommendations of the Standing committee on Academic matters, the following decisions taken by the Academic Council in its meeting held on 28.8.2001.

1. To amend Clause 5.1 of the B.Tech Regulations 2000 as follows:
  - (i) To include B.Tech in Electrical and Electronics Engineering as a discipline as Clause 5.1, and the Clause after amendment reading as follows:
 

"Clause 5.1 - B.Tech courses will be offered in the following disciplines:

    - (a) Civil Engineering
    - (b) Mechanical Engineering
    - (c) Electronics & Communication Engineering
    - (d) Computer science and Engineering
    - (e) Information Technology
    - (f) Safety and fire Engineering
    - (g) Marine Engineering
    - (h) Electronics and Biomedical Engineering
    - (i) Electronics and Instrumentation Engineering
    - (j) Electrical and Electronics Engineering
2. To approve the scheme of examinations of Semester III to VIII of B.Tech Electrical and Electronics Engineering and scheme of examinations from V to VIII Semester of B.Tech Electronics and Instrumentation Engineering as in Appendix A & B respectively.
3. To approve the amendment to Clause 3 (ii) of 1995 Ph.D Regulations as follows:
 

"Candidates shall have passed the entrance test, with a minimum of 50% marks (provided that the minimum is 45% marks for candidates belonging to SC/ST) conducted by the University through the Departments concerned which consists of one paper carrying the maximum of 100 marks".
4. To approve the revised regulations of the P.G.Diploma course in Coastal Zone Management (Appendix C)

Item No.446.18 Fee structure of P.G.Diploma course in RUDAT - Further resolved that the fee structure for the P.G.Diploma course in Rural Development and Appropriate Technology forwarded by the Director, Centre for WHO Co-operation (as in Appendix II) be approved.

Resolved that the fee structure for the P.G.Diploma course in Rural Development and Appropriate Technology forwarded by the Director, Centre for WHO Co-operation (as in Appendix II) be approved.

Further resolved that all matters relating to the RUDAT be first considered by the Advisory Committee for RUDAT and then put up to the syndicate for consideration.

Item No.446.19 Establishment - University teachers - LWA - Request from Dr.A.P.Preethy, Lecturer, Department of Electronics - Consideration of.

The Syndicate considered, the request from Dr.A.P.Preethy, Lecturer, Department of Electronics for LWA for 5 years to take up employment abroad with effect from 10.9.2001, and for extension to serve the university till she rejoins after present period of LWA requested for foreign employment.

Resolved that Dr.A.P.Preethy be granted LWA for a period of 5 years with effect from 10.9.2001 and she be permitted to fulfill the bonded obligation to serve the University for 5 years after she rejoins on expiry of the LWA granted to her.

Item No.446.20 Establishment - Sri Shijith Kumar C, Professional Assistant Grade II - Request for granting LWA.

The Syndicate noted the action taken by the Vice-Chancellor in sanctioning LWA for study purpose to Sri Shijith Kumar C, Professional Assistant Grade II for 18 months with effect from 9.4.2000 so as to enable him to complete the Ph.D programme as full time research fellow under JRF in the Department of Library and Information Science, University of Mysore.

Resolved that the action taken by the Vice-Chancellor be ratified.

Item No.446.21 Instituting merit scholarships for attracting meritorious students to School of Engineering and CUCEK.



5. To approve the modified Regulations for Post Graduate programmes from 2001-2002 admission onwards (Appendix D)

Resolved that all the above decisions taken by the Academic Council be approved.

(Conf.)

- Item No.446.23 Recognition of research guide under the Faculty of Marine Sciences.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters the application from Dr.P.G.K.Murthy, Scientist-D, Naval Physical and Oceanographic Laboratory, Kochi-21 for recognition as a Research Guide under the Faculty of Marine Sciences.

Resolved that Dr.P.G.K.Murthy, Scientist-D, Naval Physical and Oceanographic Laboratory, Kochi-21 be recognised as a Research Guide of the University under the Faculty of Marine Sciences.

(Ac.B)

- Item No.446.24 General Agreement on Trade in Services (GATS) under WTO

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the letter received from Dr.C.G.Dandapat, Secretary, UGC and forwarded by the Higher Education Department, Government of Kerala requesting to forward opinion/suggestions of the University on the issue of the General Agreement on Trade in Services (GATS) reached under WTO which covers a large spectrum of services including educational services.

Resolved that the Government be requested to take steps to safeguard our education system as also the national interest on the implementation of GATS

(Ac.A)

- Item No.446.25 Guidelines (AICTE) of effecting change of course of students in Engineering Colleges - Reg.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic Matters, the guidelines prescribed by the All India Council for Technical Education (AICTE) for effecting the change of course of students in an Engineering College in the beginning of the III Semester (2nd year).

Resolved that the guidelines prescribed by the All India Council for Technical Education (AICTE) for effecting the change of course of students in an Engineering College in the beginning of the III Semester (2nd year) (as given in Appendix III) be adopted for implementation in the University.

(Ac.A)

- Item No.446.26 B.Tech(Engineering) admission - Rules for refund of deposit/fees in the case of category change - regarding.

The Syndicate considered, along with the recommendations of the Standing Committees on Academic Matters, and Finance and Purchase, the matter of including some refund/adjustment rules in the case of category changes (as suggested by the Finance Officer), in the rules framed by the Syndicate at its meeting held on 18.11.2000 for refund of the initial deposits, tuition fee etc. from the candidates who are admitted for the B.Tech programme run by the Centre for Engineering Studies.

Resolved that the following rules also be included in the rules for refund of the initial deposits, tuition fees, etc from candidates who are admitted for B.Tech programme run by Centre for Engineering Studies.

1. For category change from NRI to payment quota:

(a) DD for US \$ 6000 be returned as it is, if not yet deposited to bank, but after obtaining a separate DD for Rs.1,00,000/- towards refundable interest free deposit. (In this case, the original copy of receipt issued for US \$ 6000 should be collected back and attached along with the office copy after duly making an endorsement to the effect of having refunded the amount and, another receipt should be issued for Rs.1,00,000/- refundable deposit later received.)

(b) If the DD for US \$ 6000 has already been deposited in the bank then arrangements should be made to refund the amount by way of cheque in equivalent Indian rupees as credited to the bank account less Rs.1,00,000/- withheld towards refundable deposit.

2. For category change from NRI seat to free seat:

(a) Procedure for refund of US \$ 6000 be the same as 1 (a) and (b) above except that Rs.1,00,000/- refundable deposit need not have to be obtained.

(b) As regards the other elements of fees (tuition fee) the excess amount collected need not be refunded under any circumstances. Instead it be adjusted against the fee due for the subsequent semesters (In this case, the original copy of receipt for the other fees collected be collected back and an endorsement made to the above effect on its reverse and also in the office copy of the receipt)

3. For category change from payment seat to free seat:

(a) The DD for Rs.1,00,000/- refundable deposit be returned as it is, if not yet deposited to bank, If the DD is already deposited in bank, Cheque for the same amount be issued.

(b) As regards other elements of fees, the procedure at (2) (b) above be applicable.

(CES)

Item No.446.27 Continued occupation of University quarters by those allottees who have changed over to higher scales of pay and those allotted lower type quarters as a special case.

The Syndicate considered, along with the recommendations of the Standing Committee on Staff and Establishment, the matter of including necessary provision to rule 10 (ii) of the quarters allotment rules since the continued occupation of the allottees concerned in the lower type quarters even after changing over to higher scales of pay adversely affects the changes of allotment of those eligible for allotment of these quarters.

Resolved that the following be added to rule 10 (ii) of the Quarters Allotment Rules:

"The occupants of University quarters who have changes over to higher scales of pay be allowed only a maximum period of 3 months to continue occupation of the ineligible type quarters in case they do not apply/occupy eligible type when notified/allotted. Such occupants shall be compulsorily vacated from the quarters after the said period".

Further resolved that in the classification of family quarters as per Rule 5 of Quarters Allotment Rules in the eligibility condition for A1-type quarters, "Professors" also be included.

(Ad.E)

Item No.446.28 Classification of certain categories as essential staff in the University service - Consideration of.

The Syndicate considered, along with the recommendations of the Standing Committee on Staff and Establishment, the matter of classification of certain categories as essential staff in the University service.

Resolved that the following categories of staff be declared as essential staff in the University service.

- (a) Security staff
- (b) Drivers and Conductors of University Vehicles
- (c) Line Helpers/Electrician, Pump Operator and Assistant Engineer in charge of ensuring uninterrupted supply of electricity and water in the campus.
- (d) Heads of Departments/Offices.

Sri.M.K.Purushothaman dissented on the above decision  
(Ad.A)

Item No.446.29 Construction of a building for International School of Photonics in Thrikkakara Campus - Revision of thickness and rate for Marble flooring - Reg.

The Syndicate considered the request of the University Engineer for sanction to complete the work of Marble Flooring (ground floor - 1883 M<sup>2</sup> and cabin floor - 60M<sup>2</sup>) of the building for International School of Photonics in Thrikkakara Campus with 20 mm size marble (instead of 25mm thick marble as per the agreement) with a deduction of 20% of the cost of marble as per schedule (ie 20% of 8320-1664/10M<sup>2</sup>) with the reduction of Rs.1,86,950/- (from Rs.11,62,526/-) for the change in the thickness.

The Syndicate took note of the fact that the same quality marble with 20 mm thickness was laid in the building constructed for the School of Environmental Studies. The measurement of 25 mm thickness entered in the agreement in the instant case was stated as a clerical lapse by the Engineering Department during the perusal of estimate submitted by the architect.

Resolved that the contractor Sri P C Thomas be directed to complete the work of Marble Flooring (ground floor - 1883 M<sup>2</sup> and cabin floor - 60M<sup>2</sup>) of the building for International School of Photonics in Thrikkakara Campus with 20 mm size marble (instead of 25 mm thick marble as per the agreement) at the same rate per M<sup>2</sup> approved by the University for marble flooring work of the building constructed for the School of Environmental Studies in the Thrikkakara Campus

(PLA)

Item No.446.30 Reconstitution of the committee to study the various aspects of the establishment of a Placement Cell in the University - Reporting of.

The Syndicate noted the action taken by the Vice-Chancellor in reconstituting the committee to study the various aspects of the establishment of the Placement Cell in the University with the Vice-Chancellor, Registrar, Finance Officer, Director, Unit for International Relations and Academic Admissions (IRAA Unit) and the Assistant Registrar, IRAA Unit as its members, and in nominating the Director, IRAA Unit as the Convener of the Committee.

Resolved that the action taken by the Vice-Chancellor be ratified.

(IRAA)

Item No.446.31 Establishment - University teacher - Rotation of headship - Nomination of Dr D Rajeev, Reader, School of Legal Studies as the Director, School of Legal Studies - Action taken - Reporting of

The Syndicate noted the action taken by the Vice-Chancellor in sanctioning to relieve Dr G Sadasivan Nair, Professor from the Directorship of the School of Legal Studies on completion of 3 years, and nominating Dr D Rajeev, Reader the next senior most teacher in the School as the new Director of the School of Legal Studies.

Resolved that the action taken by the Vice-Chancellor be ratified.

(Ad.D)

Item No.446.32 Research - Recognition of Integrated Rural Technology Centre, Mundur, Palakkad as Research Centre - Report of the Inspection Committee.

The Syndicate considered, along with the recommendation of the Standing Committee on Academic matters, the Report of the sub-committee of the Syndicate visited the Integrated Rural Technology Centre, Mundur, Palakkad to examine the facilities available at the Institute for recognizing it as a Research Centre of the University.

Resolved that a Sub Committee consisting of Dr N Chandramohana Kumar, Dr Babu T Jose and Dr D Rajasenan may be prepare a sent of norms for approving research institutions for recognition and consider the above case in the light of the prescribed norms.

(Ac.B)

Item No.446.33 Purchase of bus for CUCEK

The Syndicate considered, along with the recommendations of the Standing Committee on Finance and Purchase, the proposal forwarded by the Special Officer, Cochin University College of Engineering, Kuttanad for the purchase of a bus to meet the traveling needs of the students of the Cochin University College of Engineering, Kuttanad.

Resolved that the proposal be declined  
(CES)

Item No.446.34 Ph D thesis entitled "An investigation of the Preparation and Properties of Some Transparent Conducting Oxides and Lead Selenide Thin Films" submitted by Sri Benoy M D - Evaluation reports and minutes of viva-voce examination - Consideration of.

The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph D thesis submitted by Sri Benoy M D, Full Time Research Student, Department of Physics, Cochin University of Science and Technology, Kochi - 22 who worked under the guidance of Dr B Pradeep, Reader, Department of Physics, Cochin University of Science and Technology, Kochi - 682 022.

Resolved that Sri Benoy M D, be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Science for his thesis entitled "An Investigation of the Preparation and Properties of some Transparent Conducting Oxides and Lead Selenide Thin Films".

(Exam A)

Item No.446.35 Ph D thesis entitled "Analysis of Some Queueing Models Related to N-Policy" submitted by Sri Deepak T G - Evaluation reports and minutes of viva-voce examination - Consideration of.

The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph D thesis submitted by Sri Deepak T G, Part Time Research Student, Department of Mathematics, Cochin University of Science and Technology, Kochi-22 who worked under the guidance of Dr A Krishnamoorthy, Professor, Department of Mathematics, Cochin University of Science and Technology, Kochi - 22.

Resolved that Sri Deepak T G, be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Science for his thesis entitled "Analysis of Some Queueing Models Related to N-Policy".

(Exam.A)

Item No.446.36 M Sc Degree course in Environmental Technology - Regulations and Scheme of Examination - Approval of - Reg.

The Syndicate considered, along with the recommendations of the Standing Committee on Academic matters, the matter of approving the decision taken by the Academic Council in the meeting held on 07.09.1999 to approve the Regulations and Scheme of Examination of M Sc Environmental Technology course, and the matter of fixing the date of effect of the same.

Resolved that decision taken by the Academic Council in its meeting held on 07.09.1999 to approve the Regulations and Scheme of Examination of M Sc Environmental Technology course be approved, and the date of effect of the same be 07.09.1999, the date of the Academic Council meeting (Appendix IV)

(Conference)

Item No.446.37 Preliminary arrangements for conduct of CAT 2002 - Minutes of the Monitoring Committee - Approval for Implementation - Sought for.

The Syndicate considered, along with the recommendation of the Standing Committee on Academic Matters, the Minutes of the Monitoring Committee for Common Admission Test, 2002 held on 30.11.2001.

Resolved that the recommendations made by the Monitoring Committee for Common Admission Test 2002, in its meeting held on 30.11.2001 relating to the preliminary arrangements of conduct of CAT 2002 be approved.

(TRAA)

Item No.446.38 Recognition of Research Guide under the Faculty of Humanities - Regarding

The Syndicate considered, along with the recommendations of the Standing Committees on Academic matters the application from Dr K Murugesan, Reddiar, Professor, Department of Foreign Languages and Dr (Mrs.) Mariamma Chacko, Senior Lecturer, Department of Foreign Languages for recognition as Research Guides of the University under the Faculty of Humanities

Resolved that Dr K Murugesan Reddiar, Professor, Department of Foreign Languages and Dr.(Mrs.) Mariamma Chacko, Senior Lecturer, Department of Foreign Languages be recognised as Research Guides of the University under the Faculty of Humanities

(Ac.B)

Item No.446.39 Recognition of Research Guide under the Faculty of Science - Reg.

The Syndicate considered, along with the recommendations of the Standing Committees on Academic matters the application from Dr P V Mohanan, Lecturer, Department of Applied Chemistry as a Research Guide of the University under the Faculty of Science.

Resolved that Dr P V Mohanan, Lecturer, Department of Applied Chemistry, CUSAT be recognised as a Research Guide of the University under the Faculty of Science

(Ac.B)



Item No.446.49 Maintenance to University Guest House at Thrikkakara Campus - Estimates - Reg.

The Syndicate considered, along with the recommendations of the Standing Committee on Works, the proposal of the University Engineer to award the work of maintenance to University Guest House at Thrikkakara Campus to contractor Sri A M Ansair, Ariketh House, Kochi-22 at the negotiated rate of 26.2% above the estimate rate (based on 1999 PWD schedule of rate) the total expenditure being Rs.5,06,046/- less cost of departmental materials.

Resolved that the proposal of the University Engineer to award the work of maintenance to University Guest House at Thrikkakara Campus to contractor Sri A M Ansari, Ariketh House, Kochi-22 at the negotiated rate of 26.2% above the estimate rate (based on 1999 PWD schedule of rate) the total expenditure being Rs.5,06,046/- less cost of departmental materials be approved.

Further resolved that the expenditure in this connection be met from "2-97-0-T-999 Minor Works" provided in the budget of the University.

(PLA)

Item No.446.50 P G Diploma in Integrated Management of Coastal Zones - Approval of fee structure  
No1 of candidates to be admitted - Reg.

The Syndicate considered along with the recommendations of the Standing Committee on Academic matters and Finance and Purchase, the proposal forwarded by Dr N R Menon, Honorary Director, Centre for Integrated Management of Coastal Zones for the fee structure of the PG Diploma Course in Integrated Management of Coastal Zone to be started in early 2002 and the request to fix the intake capacity of the course.

Resolved that the proposed fee structure of the PG Diploma Course in Integrated Management of Coastal Zones forwarded by the Hon. Director, Centre for Integrated Management of Coastal Zones be approved with the following changes:

- (1) The Caution deposit be enhanced to Rs.2,000/-
- (2) The tuition fee be enhanced to Rs.6,000/- including the library fee and stationery fee
- (3) Examination fee be enhanced to Rs.500/-

Further resolved that the intake capacity of the course be fixed at 15 inclusive of 5 candidates from sponsored category.

(Ac.A)

Item No.446.51 to 446.72 be deferred for consideration in the next meeting.

Item No.446.73 Ph D thesis entitled "Photoacoustic and Photothermal Deflection Studies on Certain Selected Photonic Materials" submitted by Sri Nibu A George - Evaluation reports and minutes of viva-voce examination - Consideration of.

The Syndicate considered, the individual reports of the Examiners, recommendations of the viva-board and the minutes of the viva-voce examination in respect of the Ph D thesis submitted by Sri Nibu A George, Full Time Research Student, International School of Photonics, Cochin University of Science and Technology, Kochi-22 who worked under the guidance of Dr P Radhakrishnan, Professor, International School of Photonics, Cochin University of Science and Technology, Kochi - 682 022.

Resolved that Sri Nibu A George be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Technology for his thesis entitled "Photoacoustic and Photothermal Deflection Studies on Certain Selected Photonic Materials".

(Exam.A)

Item No.446.74 Construction of 3 Nos. of semi-permanent drawing halls for CUCEK, Pulinkunnu -  
Work awarding - Regarding

The Syndicate considered, along with the recommendations of the Standing Committees on Finance and Purchase, and Works, the proposal of the University Engineer to award the work of construction of 3 Nos. of semi permanent drawing halls for the Cochin University College of Engineering, Kuttanad to Sri K M Abdul Khader Kunju, Rose House, Mannachery P O, Alappuzha at 17.71% above the estimate based on 1999 PWD schedule of rates, the total expenditure being Rs.22,95,278/- (Twenty two lakhs ninety five thousand two hundred and seventy eight only) including cost of departmental materials.

Resolved that the proposal of the University Engineer to award the work of construction of 3 Nos. of semi permanent drawing halls for the Cochin University College of Engineering, Kuttanad to Sri K M Abdul Khader Kunju, Rose House, Mannachery P O., Alappuzha at 17.71% above the estimate based on 1999 PWD schedule of rates, the total expenditure being Rs.22,95,278/- (Twenty two lakhs ninety five thousand two hundred and seventy eight only) including cost of departmental materials be approved.

(PLA)

Item No.446.75 Smt Selin George, Editorial Assistant on deputation - Further extension of deputation for a period of one year - Request Consideration of.

The Syndicate considered, along with the recommendations of the Standing Committees on Staff and Establishment, the matter of continuance of the services of Smt Selin George, Editorial Assistant, State Institute of Encyclopaedic Publications in the University on deputation basis for a period of one year w.e.f. 01.02.2002.

Resolved that Smt Selin George, Editorial Assistant, State Institute of Encyclopaedic Publications be permitted to continue on deputation in the University service for a further period of one year w.e.f. 01.02.2002

(Ad.A)

Item No. 446.76 : Controller of Examinations - Expiry of the term of appointment - Nomination of new controller or extension of the period of appointment of the present incumbent - consideration of -

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This Syndicate considered the matter of making appointment to the post of the Controller of Examination on the expiry of the present term of appointment of Dr. K.R. Muraleedharan Nair, which expires on 1-3-2002.

Resolved that a circular be issued inviting applications from the Professors of this University who are willing to be appointed as Controller of Examinations on deputation basis and that the present Controller of Examinations may continue until appointment is made as per the applications.

(Ad.A)

Item No. 446.77 was deferred for consideration in the next meeting.

Item No. 446.78 : Supply of inferior quality furniture - Withholding of payment to M/s. Matly Wood Industries, Kakkanad.

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The Syndicate considered, along with the recommendation of the Standing Committee on Finance and Purchase, the matter of releasing the payment to M/s. Matly Wood Industries, Kakkanad towards supply of wooden furniture for use of Cochin University College of Engineering, Pulincunnu and School of Engineering, in the light of the report regarding the extent of quality items received from the supplier received from the Special Officer, CUCEK and the Principal, School of Engineering.

Resolved that 80% (Eight percent) of the total cost of the furniture be released to M/s. Matly Wood Industries, Kakkanad, and the remaining 20% be paid after settling the whole issue.

(CES)

Item Nos. 446.79 to 446.81 be deferred for consideration in the next meeting.

Item No. 446.82 : Ph.D. thesis entitled, "Ultrasonic Measurements of the Elastic Constants of Selected Non-linear Optical/Semi organic Crystals with Orthorhombic Symmetry" submitted by Sri. Alex.A.V. - Evaluation reports and minutes of viva-voce examination - consideration of.

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The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph.D. thesis submitted by Sri. Alex.A.V., Part Time Research Student, Department of Instrumentation, Cochin University of Science and Technology, Kochi - 682 022 who worked under the guidance of Dr. Jacob Philip, Professor and Head, Department of Instrumentation, Cochin University of Science and Technology, Kochi-682 022.

Resolved that Sri. Alex.A.V. be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Technology for his thesis entitled "Ultrasonic Measurements of the Elastic Constants of Selected Non-linear Optical/Semi organic Crystals with Orthorhombic Symmetry".

(Exam.A)

Item No. 446.83 : Ph.D. thesis entitled, "Synthesis of Rubber Ferrite Composites Containing mixed Ferrites and Studies on Their Magnetic and Electrical Properties" submitted by Sri. Mohammed E.M. - Evaluation reports and minutes of viva-voce examination - consideration of.

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The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph.D. thesis submitted by Sri. Mohammed E.M., Full Time Research Student, Department of Physics, Cochin University of Science and Technology, Kochi - 682 022 who worked under the guidance of Dr. M.R. Anantharaman, Senior Lecturer, Department of Physics, Cochin University of Science and Technology, Kochi - 682 022.

Resolved that Sri. Mohammed E.M. be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Science for his thesis entitled "Synthesis of Rubber Ferrite Composites Containing mixed Ferrites and Studies on Their Magnetic and Electrical Properties".

(Exam.A)

Item No. 446.84 : Ph.D. thesis entitled, "Studies on the Structural Electrical and Magnetic Properties of Composites Based on Spinel Ferrites" submitted by Smt. Malini-K.A. - Evaluation reports and minutes of viva-voce examination - consideration of.

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The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph.D. thesis submitted by Smt. Malini K.A., Full Time Research Student, Department of Physics, Cochin University of Science and Technology, Kochi - 682 022, who worked under the guidance of Dr. M.R. Anantharaman, Senior Lecturer, Department of Physics, Cochin University of Science and Technology, Kochi - 682 022.

Resolved that Smt. Malini.K.A. be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Science for her thesis entitled "Studies on the Structural Electrical and Magnetic Properties of Composites Based on Spinel Ferrites".

(Exam.A)

Item No. 446.85 : Ph.D. thesis entitled, "Studies on liminite of the Chavara and Manavalakurichi Deposits, South West Coast of India" submitted by Sri. Ajith G.Nair - Evaluation reports and minutes of viva-voce examination - consideration of.

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The Syndicate considered, the individual reports of the Examiners, recommendations of the viva board, and the minutes of the viva-voce examination in respect of the Ph.D. thesis submitted by Sri. Ajith.G.Nair, Full Time Research Student, Department of Marine Geology and Geophysics, Cochin University of Science and Technology, Kochi-682 016 who worked under the guidance of Dr.K.T.Damodaran, Professor, Department of Marine Geology and Geophysics, Cochin University of Science and Technology, Kochi - 682 016.

Resolved that Sri. Ajith.G.Nair be declared eligible for the award of the degree of the Doctor of Philosophy under the Faculty of Marine Sciences for his thesis entitled "Studies on liminite of the Chavara and Manavalakurichi Deposits, South West Coast of India."

(Exam.A)

# ITEMS OUTSIDE THE AGENDA

(1) The Syndicate resolved that Dr.K.P.Rajappan Nair, Chairman of the Advisory Committee for the Centre for Rural Development and Appropriate Technology be authorized to convene the committee and report its perceptions/recommendations to the Syndicate.

(2) The Syndicate considered a proposal from the Principal, College of Engineering, Munnar for inclusion of the 3 year Diploma course conducted by the Polytechnics as a qualification for admission to the B.Tech. Engineering course of the University.

Resolved to change the eligibility condition for admission to the 1st year B.Tech. course under the University for the current academic year that the 3 year Diploma course conducted by the Polytechnics be included as a qualification for admission as stipulated in the prospectus 2001 issued by the Commissioner of Entrance Examinations of the Government of Kerala for admission to the B.Tech. Engineering Programmes of the University and the matter be reported to the Academic Council.

(3) The Syndicate was appraised of the vacancy position in seats for admission to M.Sc. Software Engineering and B.C.A. courses and its adverse impact on the receipts to the University.

Resolved to effect change in the Regulations to the extent that this year's admission to the M.Sc. Software Engineering and B.C.A. courses be done on the basis of the marks obtained by the candidate in the qualifying examinations, for the existing vacancies if sufficient candidates from the CAT are not available and the matter be reported to the Academic Council.

(4) The Syndicate noted the case of Sri.K.Balakrishnan, a research student of the Regional Research Laboratory, Thiruvananthapuram who worked under the guidance of Dr. Asok Pandey, and submitted the thesis for the award of Ph.D. degree of this University had been alleged to have committed plagiarism in preparing his Ph.D. thesis. On the recommendation of a sub-committee of the Syndicate, which enquired into the matter, he had been directed to submit the thesis within one year under a new supervising guide. He is finding it difficult to fix up a supervising guide within the stipulated time frame.

It was resolved that Sri. Balakrishnan may seek part time registration with one of the teachers of the Department of Biotechnology of this University or a recognized institution for the supervision of the research work and the one year period stipulated in the earlier resolution be reckoned from the date of registration.

- (5) The Syndicate considered the request made by the Principal, School of Engineering and recommended by the Director, Centre for Engineering Studies for making appointments to the posts of (1) Lecturer in Mathematics, and (2) Lecturer in Chemistry.

Resolved that appointments be made to the post of Lecturer in Mathematics, and Lecturer in Chemistry in the School of Engineering from the Existing rank lists for the posts.

It was also resolved that appointments be made to the teaching positions for which requests have been made by the Special Officer, Cochin University College of Engineering, Pulinkunnu, from the existing rank lists for the posts.

- (6) It was brought to the notice of the Syndicate that MCA students represented for conducting a re-examination for the paper Computer Graphics of II Semester.

Resolved that a re-examination be conducted for MCA Computer Graphics II Semester Examination as a special case and this be reckoned as the 1st chance.

- (7) A request was brought to the Syndicate to reserve two seats in the Mens Hostel for the SC/ST students of M.Tech. CASAD (Self-financing) run by the Department of Ship Technology.

Resolved that one seat be reserved for an SC/ST student of the M.Tech. CASAD (Self-financing) course of the Department of Ship Technology.

- (8) The Syndicate considered a proposal for constructing hostels for B.Tech. Students.

Resolved that two new hostels (one for boys and one for girls) be constructed in the University Campus, Thrikkakara for the B.Tech. students of School of Engineering as per approved plan and estimates meeting the expenses from the self-financing sector to the tune of a maximum of Rs. 1 crore for each hostel.

- (9) It was brought to the notice of the Syndicate that applications were invited for the post of Technical Assistant Grade II (Computer Science) in the Computer Centre in the Department of Computer Science and candidates who have qualified in the written test were shortlisted. The Syndicate considered the matter of conducting interview for the post.

It was resolved that steps be taken to conduct interview for the post.

- (10) The Syndicate was informed that the following two collaborative research projects between the Coir Board and the University submitted from the School of Engineering have been sanctioned by the Coir Board, Ministry of Small Scale Industries, Government of India.

- (i) "Potentialities of coir on consolidation of soil" under the principal investigatorship of Smt. Sobha Cyrus, and  
(ii) "Study on the use of coir bhoovasthra in pavements" under principal investigatorship of Dr.K.S.Beena.

The Syndicate considered the matter of approving the draft Memorandum of Understanding relating to the implementation of these projects.

It was resolved that the enclosed draft Memorandum of Understanding relating to the implementation of the above two projects be approved by the University.

- (11) The Syndicate considered the request of Sri. Harikrishnan C.R., a student of B.Tech. degree course in Computer Science at the Cochin University College of Engineering, Pulinkunnu, admitted under payment category (2000-2001) for a transfer to the Computer Science branch under the category of free seats, after the closure of admissions. This request was considered in the context of the unsound financial position of his family consequent to his mother becoming a cancer patient.

Resolved that the request of Sri.Harikrishnan.C.R. student of B.Tech. degree course in Computer Science at the Cochin University College of Engineering, Pulinkunnu, admitted under payment category (2000-2001) be transferred under the category of free seats as a special case.

The meeting came to an end at 1 p.m.

Kochi - 22,  
31-01-2002.

REGISTRAR

## APPENDIX TO ITEM No. 446.06

POST GRADUATE DIPLOMA IN SOFTWARE ENGINEERING  
FOR ENGINEERS (PGDSEE) 2001. REVISED CURRI-  
CULUM AND SCHEME OF EXAMINATIONS:

Semester I								
Course Code	Subject	Periods/Max. week		Sess- Marks	Final Exams Durat- ion hrs	Max. marks	Total marks	Credits
		L	T/ D/P					
PGDSEE 101	Management Information System	4	--	50	3	50	100	2
PGDSEE 102	Object Oriented programming	4	3	50	3	100	150	4
PGDSEE 103	Database programming	4	--	50	3	50	100	3
PGDSEE 104	Computer Aided project Management	4	3	50	3	100	150	3
PGDSEE 105	CAD in Engineering	--	3	100	--	--	100	3
PGDSEE 106	RDBMS Lab	--	3	100	--	--	100	2
PGDSEE 107	Dissertation	--	2	100	--	--	100	3

SEMESTER II								
PGDSEE 201	Geographical Information system	4	--	50	3	50	100	3
PGDSEE 202	In inter-networking & Java Programming	4	3	50	3	100	150	4
PGDSEE 203	Advanced Computing Techniques	4	3	50	3	50	100	3
PGDSEE 204	GIS Lab	--	3	100	--	--	100	2
PGDSEE 205	Elective (Lab)	--	6	100	--	--	100	3
PGDSEE 206	Seminar	--	1	50	--	--	50	1
PGDSEE 207	Project & Viva Voce	2	2	100	--	100	200	4
Total		12	18	500		300	800	20

PGDSEE 205(a) CAD in Civil Engineering  
PGDSEE 205(b) CAD in Mechanical Engineering  
PGDSEE 205(c) CAD in Electrical and Electronics Engineering

Grand total - 40 credits

5. Pass Requirements and Classifications;  
Pass requirements and classifications is amended as follows.

5.1 A candidate who secures not less than 50% marks in a subject (Sessional and final examination marks external put together) shall be declared to have passed the examination in that subject.

A candidate who secures not less than 50% marks for the final project and its evaluation shall be declared to have passed the examination in the project and viva-voce.

5.2 Pass Requirements and Classification:

Credit system is followed. Based on the overall performance (aggregate marks) in a course at the end of a semester, letter grades will be assigned based on the following scheme.

Range of marks	Grade	Weight
90% and above	E(Excellent)	4
75% and 89%	A	3
60% - 74%	B	2
50% - 59%	C	1
Less than 50%	FAIL	0

Overall performance at the end of the semester will be indicated by Grade Point Average (GPA) calculated as follows:

$$GPA = \frac{G_1C_1 + G_2C_2 + G_3C_3 + \dots + G_nC_n}{C_1 + C_2 + C_3 + \dots + C_n}$$

Where 'G' refer to the grade weight and 'C' refer to the Credit value of the corresponding course underwent by the student.

At the end of the II semester, a cumulative Grade Point Average (CGPA) will be calculated based on the above formulae.

5.3 A candidate who qualified for the Diploma, passing the examinations for all the subjects including the final project in the first available chance and secures a CGPA of 3 and above shall be declared to have passed in First Class with Distinction.

5.4 A candidate who qualified for the Diploma, passing the examinations for all the subjects including the final project and secures a CGPA of 2 and above shall be declared to have passed in First Class, provided he has completed the course within a period of four semesters.

5.5 Candidates who secure CGPA of 1 and above shall be declared to have passed all the examinations for the Diploma in II class.

5.6 Ranking among the candidates will be limited to those who have passed all the examinations in the first available chance and have secured 'First Class'. Student rank will be decided on the basis of the CGPA. In case of a tie the percentage marks will be considered for a decision.



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MASTER OF COMPUTER APPLICATIONS  
(MCA) COURSE STRUCTURE

<u>Semester I</u>				
Code	Course	Marks : Internal External Total		
1.1	Combinatorics and Graph Theory	50	50	100
1.2	Probability and Statistics	50	50	100
1.3	Data Structures with C	50	50	100
1.4	Computer Organization	50	50	100
1.5	Discrete Mathematical structures	50	50	100
1.6	Viva-voce (Internal)	100	0	100
<u>Semester II</u>				
2.1	Computer Graphics	50	50	100
2.2	Internet Application Concepts	50	50	100
2.3	Computer algorithm	50	50	100
2.4	Applied Numerical analysis	50	50	100
2.5	Computer based optimization	50	50	100
2.6	Viva-voce (External)	0	100	100
<u>Semester III</u>				
3.1	System Software	50	50	100
3.2	Database systems	50	50	100
3.3	Software Engineering	50	50	100
3.4	Management Information Systems	50	50	100
3.5	Object Oriented programming with C++	50	50	100
3.6	Viva-voce (Internal)	100	0	100
<u>Semester IV</u>				
4.1	Operating system	50	50	100
4.2	Artificial Intelligence	50	50	100
4.3	Elective I	50	50	100
4.4	Elective II	50	50	100
4.5	Mini Project Work	100	0	100
4.6	Viva-voce (External)	0	100	100
<u>Semester V</u>				
5.1	Networks and Data Communications	50	50	100
5.2	Simulation and Modelling	50	50	100
5.3	Compiler Design	50	50	100
5.4	Elective I	50	50	100
5.5	Elective II	50	50	100
5.6	Seminar	100	0	100
5.7	Viva-voce (Internal)	100	0	100
<u>Semester VI</u>				
6.1	Project Work and Viva-voce	200	200	400

Electives :

E1. Visual Programming	E2. Internet and website Design
E3. Distributed Computing	E4. Enterprise Resource Planning
E5. Decision Support Systems	
E6. Performance Evaluation of Computer Systems	
E7. Windows programming	E8. Unix Internals
E9. Web Commerce Technologies	
E10. Parallel Computing	E11. Security in Computing
E12. Intelligent systems	E13. Principles of concurrent programming.

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INTERNATIONAL SCHOOL OF PHOTONICS  
COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY  
M.TECH (OE & LT) REVISED SCHEME OF EXAM

<u>Semester I</u>				
Course	Subject	Work/week Lecture Lab	Credit	Marks Inter-Exter-Total nal nal
OE 110	Modern Optics	4	4	50 50 100
OE 120	Laser Technology	4	4	50 50 100
OE 130	Optoelectronics	4	4	50 50 100
OE 140	Optical communication Technology	4	4	50 50 100
OE 151	Lab course I	12	8	100 100
OE 161	Seminar	1	1	50 50
OE 171	Viva Voce		1	50 50
OE 181	Industrial Management	1	1	50 50
OE 182	Industrial Management Project		1	50 50

Bridge Courses (\*)

OE 101 Physics Short Course  
OE 102 Electronics Short Course

(\*) 10 lectures each; no grades/credits-for homogenisation

Total for Semester I	18	12	28	500	200	700
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SEMESTER II

OE 210	Laser Applications	4	4	50	50	100
OE 220	Fibre Optics and its applications	4	4	50	50	100
OE 230	Nonlinear Optics, Optical signal processing and optical computing	4	4	50	50	100
OE 240	Electives (any one)	4	4	50	50	100
OE 250	Lab Course II	13	8	100		100
OE 261	Seminar	1	1	50		50
OE 271	Viva Voce		1	50		50

Electives

OE 241 Digital Communication  
OE 242 Digital Signal Processing  
OE 243 Laser Spectroscopy  
OE 244 Photonics Materials and Devices  
OE 245 Science and Technology of Plasma  
OE 246 Integrated Optics

Total for Semester II	17	13	26	400	200	600
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SEMESTER III

OE 311 Project work	16	150	150	300
OE 361 Viva based on project		50	50	100
Total for semester III	16	200	200	400
TOTAL FOR THE COURSE	37	23 70	1100	600 1700

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REVISED SCHEME OF GRADING FOR M.TECT(OE&LT)  
DEGREE COURSES (GRADING IN 10 POINTS SCALE)

Range of marks	Grade	Weightage
Grater than or equal to 95%	E	10
Grater than or equal to 90% but less than 95%	EA	9
Grater than or equal to 80% but less than 90%	A	8
Greater than or equal to 70% but less than 80%	B	7
Greater than or equal to 60% but less than 70%	C	6
Greater than or equal to 50% but less than 60%	D	5
Less than 50%	F	0

INTERNATIONAL SCHOOL OF PHOTONICS  
COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY  
M.Phil (Photonics) - 2001 - Scheme of Exam

SEMESTER I

Course	Subject	Work/week		Cre-	Marks	Inter-	Exter-	To-
		Lecture	Lab			nal	nal	
Ph 101	Lasers and Optical electronics	5	5	5	100	100	200	
Ph.102	Fibre Optics and Optical Image Processing	5	5	5	100	100	200	
Ph 103	Teaching and Learning Techniques in University Science Education	3		3	100		100	
Ph 104	Education - Mini Project	5		2	50		50	
Ph 104	Seminar	2		1	50		50	
TOTAL FOR SEMESTER I		20	10	16	400	200	1000	

REVISED SCHEME OF GRADING FOR M.PHIL(PHOTONICS)  
DEGREE COURSES (GRADING IN 10 POINTS SCALE)

Range of marks	Grade	Weightage
Greater than or equal to 95%	E	10
Grater than or equal to 90% but less than 95%	EA	9
Greater than or equal to 80% but less than 90%	A	8
Greater than or equal to 70% but less than 80%	B	7
Greater than or equal to 60% but less than 70%	C	6
Greater than or equal to 50% but less than 60%	D	5
Less than 50%	F	0

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Appendix to Item No.446.18

APPENDIX II

I. For Regular Students

1. Tuition Fee	Rs.1750/- (Rs.3000/- for sponsored candidates)
2. Library Fee	Rs.300/-
3. Laboratory Fee	Rs.300/-
4. Stationery Fee	Rs. 25/-
5. University Union Fee	Rs. 50/-
6. Students Aid Fund	Rs. 40/-
7. Sports Fee	Rs.25/-
8. Medical Inspection Fee	Rs.15/-
9. Quasi University Fee	Rs.60/-
10. Matriculation fee	Rs.60/-
11. Recognition fee	Rs.75/-
12. Caution Deposit	
a. Library	Rs.250/-
b. Laboratory	Rs.250/-

## Appendix to Item No.446.22

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

CENTRE FOR ENGINEERING STUDIES

B.TECH ELECTRICAL AND ELECTRONICS ENGINEERING

## SCHEME OF EXAMINATION

## Combined I and II Semester

Course No.	Subject	No. of Hrs. per week	Inter-nal Marks	University Marks	Total Marks
CE/ME/SE/EC/EB/E1/CS/IT/EE 101	Engineering Mathematics I	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 102	Engineering Mathematics II	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 103	Engineering Physics	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 104	Engineering Chemistry	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 105	Engineering Mechanics	4	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 106	Engineering Graphics	4	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 107	Fundamentals of Engg. I	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 108	Fundamentals of Engg. II	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 109	Computer Fundamentals	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 110	Humanities	2	50	100	150
CE/ME/SE/EC/EB/E1/CS/IT/EE 111	Computer Programming Lab	3	100		100
CE/ME/SE/EC/EB/E1/CS/IT/EE 112	Workshops	3	100		100
TOTAL		30	700	1000	1700

## Semester III

CS/ME/SE/EC/EB/E1/CS/IT/EE 301	Engineering Mathematics III	5	50	100	150
EE 302	Strength of Material & Fluid	5	50	100	150
EC/E1/EE 303	Net work Analysis	4	50	100	150
EC/EB/CS/EE 304	Digital Electronics	5	50	100	150
EE 306	Electronics Lab I	3	75	75	150
EE 307	Basic Electrical Engineering Lab	3	75	75	150
Total		30	400	650	1050

## Semester IV

CE/ME/SE/EC/EB/E1/CS/IT/EE 401	Engineering Mathematics IV	5	50	100	150
EC/EB/E1/EE 402	Electronics Circuits	5	50	100	150
EE 403	Electrical Measurements and Measuring Instruments	4	50	100	150
EC/EB/E1/CS/EE/404	Computer Architecture & Organization	5	50	100	150
EE 405	Electrical Machines I	5	50	100	150
EC/EB/E1/CS/EE 406	Digital Electronics Lab	3	75	75	150
EE 407	Electrical Machines Lab I	3	75	75	150
Total		30	400	650	1050

Semester V

EC/E1/EE 501	Electromagnetic Theory	5	50	100	150
ME/EC/EB/E1/CS IT/EE 502	Industrial Organisation and Management	5	50	100	150
EC/EB/E1/CS/EE 503	Microprocessor System Design	5	50	100	150
EE 504	Electrical Machines II	4	50	100	150
EC/EE 505	Industrial & Power Electronics	5	50	100	150
EE 506	Measurements Lab	3	75	75	150
EE 507	Electrical Machines Lab II	3	75	75	150
Total		30	400	650	1050

Semester VI

EC/E1/CS/EE 601	Digital Signal Processing	5	50	100	150
EE 602	Electrical Material Science	5	50	100	150
E1/EE 603	Communication Engineering	4	50	100	150
EE 604	Electrical Machine Design	5	50	100	150
EE 605	Electronic Instrumentation	5	50	100	150
EE 606	Microprocessor Lab	3	50	100	150
EE 607	Power Electronics Lab	3	75	75	150
Total		30	375	675	1050

Semester VII

EE 701	Control System I	5	50	100	150
EE 702	Power System I	5	50	100	150
EE 703	Electrical Engg. Drawing	4	50	100	150
EE/EC/EB/E1 704	Object Oriented Programming	4	50	100	150
EE 705	Elective I	4	50	100	150
EE 706	Software Lab	3	75	75	150
EE 707	Electronics & Instrumentation Lab	3	75	75	150
EE 708	Seminar	2	50		50
Total		30	450	650	1100

Semester VIII

EE 801	Control System II	4	50	100	150
EE 802	Power System II	4	50	100	150
EC/EB/EE 803	Computer Networks	4	50	100	150
EE 804	Computer Aided Electrical Design	4	50	100	150
EE 805	Elective II	4	50	100	150
EE 806	Project Work	10	150		150
EE 807	Viva Voce			100	100
Total		30	400	600	1000

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## Appendix (B)

(Meeting of Faculty of Engineering on 26-06-2001)  
B.TECH-ELECTRONICS AND INSTRUMENTATION ENGINEERING

## Scheme of Examinations

## Semester V

Course No.	Subject	No. of Inter- Hrs. per week	Univer- sity marks	Total marks
E1/EC 501	Electromagnetic Theory	5	50	100
E1/EC 502	Principles of Manage- ment	5	50	100
E1/EC 503	Microprocessor System Design	5	50	100
E1/ 504	Instrumentation Engi- neering II	4	50	100
E1/EC 505	Industrial & Power Electronics	5	50	100
E1 506	Microprocessor System Lab	3	75	75
E1 507	Instrumentation Lab I	3	75	75
Total		30	400	650

## Semester VI

E1/EC 601	Digital Signal Pro- cessing	5	50	100
E1 602	Process Instrumen- tation	5	50	100
E1/EC 603	Communication Engg.	5	50	100
E1 604	Digital Communication	4	50	100
E1/EC 605	Control System Engg.	5	50	100
E1 606	Instrumentation Lab II	3	75	75
E1 607	Mini Project	3	75	75
Total		30	400	650

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## Semester VII

E1 701	Industrial Instrumentation	5	50	100
E1/EC 702	Digital system design	4	50	100
E1/703	Automatic Process	5	50	100
E1/704	Control Object Oriented Programming	4	50	100
E1/705	Elective I	4	50	100
E1 706	Digital Signal Process- ing Lab	3	75	75
E1 707	Process Control Lab	3	75	75
E1 708	Seminar	2	50	-
Total		30	450	650

## Semester VIII

E1 801/EC 805 A	Biomedical Instrumentation	4	50	100
E1/EC 802	VLSI Design	4	50	100
E1/EC 803	Computer networks	4	50	100
E1 804	Optical Instrumentation	4	50	100
E1 805	Elective II	4	50	100
E1 806	Project Work	10	150	-
E1 807	Viva-voce			100

## Elective I

## Elective II

E1 705(A)/EC 703	Electronic Product Design	E1 805(A)/ CS 802	Artificial Intelligence
E1 705(B)/ CS 705(B)	Simulation & Modelling	E1 805(B)/ EC 801	Audio & Video systems
E1 705 (C)/ CS 704	Computer Graphics	E1 805 C	Space Instru- mentation



**P.G.DIPLOMA COURSE IN COASTAL ZONE MANAGEMENT  
REGULATIONS**

**1. INTRODUCTION**

The Post Graduate Diploma course in Coastal Zone Management is a two semesters programme offered by the Centre for Integrated Management of Coastal Zones (C-IMCOZ) at the School of Marine Sciences, Cochin University of Science & Technology.

**2. ELIGIBILITY FOR ADMISSION**

a) Bachelor degree in Engineering/Master's degree in Science from CUSAT or any other university recognized by the Cochin University of Science and Technology with at least 55% marks. Rank list for admission will be prepared on the basis of the score obtained in the entrance test conducted by the Departmental test governed by the CAT regulations.

b) Candidates with eligibility of 2(a) shall be eligible to join the course by paying the prescribed fees.

**3. EXAMINATION**

There will be University examinations in each module at the end of the semester. For the purpose of evaluating the student the marks obtained in the University examinations and the internal assessment marks (marks obtained in class tests, seminars, assignments etc.) shall be considered as shown in the course structure. The sessional marks awarded in a course shall be carried over in case a student has to reappear for the University examination for that particular course, 15 months from the date of admission.

There shall be a supervisor for the project work of each student. The Hon. Director of the Centre in consultation with the Chief Course Co-ordinator and supervisor may permit an extension of the date for submitting the project work by not more than 3 months. The whole course must be completed within a period of 4 semesters starting from the date of commencement of the first semester.

Those who are admitted as per 2(b) will be declared to have passed the modules taken by them provided they secure 50% marks of the aggregate of the internal and external examinations and satisfy the rules regarding admission.

**4. Attendance**

University rules regarding attendance shall prevail.

**5. AWARD OF PG DIPLOMA**

The full course consists of 8 modules and a project work. A candidate who secures a minimum of 50% of the total marks in each module shall be declared to have passed the examination in that module. On securing 50% marks on the aggregate for each module (University examination and internal assessment) the student will be qualified for the award of

the P.G.Diploma. Lateral entry into any of the module is allowed on payment of prescribed fee which will be decided by the University.

**6. COURSE STRUCTURE AND SCHEME OF EXAMINATION**

**P.G.DIPLOMA IN COASTAL ZONE MANAGEMENT**

Name of Course	Exam IA	Marks Univ.	Total	Time Hrs
<b>SEMESTER I</b>				
CZM01 Monitoring techniques	40	60	100	3
CZM02 Coastal Processes and Morphology	40	60	100	3
CZM03 Coastal Resources and Environment	40	60	100	3
CZM04 Coastal Hygiene and Sanitation	40	60	100 400	3
<b>SEMESTER II</b>				
CZM05 Coastal Engineering	40	60	100	3
CZM06 Coastal Issues	40	60	100	3
CZM07 Coastal Hazards and Disaster Mitigation	40	60	100	3
CZM08 Decision support and Management Techniques	40	60	100	3
CZM09 Project Work	30	120	200 600	
<b>GRAND TOTAL</b>			1000	

**Note:**

1. Internal assessment (IA) based on the work done in the class performance at seminars, home assignments, class tests etc.
2. Each theory paper consists of 60 hours.
3. Project work involves preferably attachment to R&D institutions, planning, developmental institutions

**7. FEES**

The selected candidates shall pay the fees for the 1st semester at the time of the admission. Fees for the second semester shall be paid at the beginning of the semester. The fees comprise of the tuition fee, caution deposit, matriculation registration fee, laboratory fee, recognition fee, stationery fee, University Union fee, Sports fee, students aid fund, medical fee etc. The University will fix amount of fees at the time of admission.

#### 4. DECLARATION AND CLASSIFICATION OF THE RESULTS OF EXAMINATION

A candidate who qualifies for the diploma by passing all prescribed modules of all semesters in the first chance within a period of two semesters after the commencement of the course of the study and secures 75% or more of the aggregate marks of all semesters, shall be declared to have passed in First class with Distinction.

A candidate who qualifies for the degree by passing all the prescribed modules of all semesters in the first chance within a period of two semesters after the commencement of the course and secures an aggregate of 60% and above but below 75% shall be declared to have passed in First class. All other successful candidates shall be declared to have passed in second class. Ranking among candidates will be limited to those who have passed all the examinations in within a period of two successive semesters and have secured First class.

A candidate who qualifies in modules 1 and 8 and any two other modules will be eligible for the award of PG certificate issued by the University.

#### 9. REVISION OF REGULATION AND CURRICULUM

The University may from time to time, revise, amend or change the regulations, schemes of examinations and syllabus.

#### CZMO1

##### MONITORING TECHNIQUES

Unit 1. Scientific methods of analysis - measurement units of environmental parameters - qualitative and quantitative methods - data collection and data banks, applications in coastal zone - quality standards - fixed and moving standards - standard fixing procedures - judgement and decision making based on standards.

Unit 2. Surveying - methodology - monitoring - goals - planning field work - sampling techniques including rural appraisal techniques - primary and secondary data - data processing - inventory studies - sampling and storage protocols - analytical techniques - selection of environmental parameters - frequency - spatial distribution - urban and rural scenarios - socio-cultural and economic aspects - appraisal techniques.

Unit 3. RS/GIS - basics of remote sensing - images from space and aerial photographs - geographical data - data acquisition and processing - image analysis - interpretation of data - accuracy - ground truth - GIS platform for convergence of technological fields and traditional disciplines - enabling technology - data integration, GIS as an information data base and use in coastal zone management.

Unit 4. Modeling - system analysis - insight into spatial relation - objectives - Statistics - sorting - simple mathematical approaches - progression - trends - test of fitness - extrapolation techniques, mathematical, statistical and other approaches - empirical relations - complex scenarios - introduction to computer applications in CZM - computer aided model - application packages - decision making and analysis of developmental scenarios - feedback - refinement - practical applications in coastal zone.

Unit 5. Instrumentation - in-situ measuring devices - remotely controlled devices and sensors - DGPS - physical parameters and instruments - chemical procedures - instrumentation and devices - biological approach - ecosystem study - counting techniques - size and groups - biodiversity index - geological/geophysical methods and instruments.

#### CZMO2

##### COASTAL PROCESSES AND MORPHOLOGY

Unit 1. Sedimentology - Origin and classification of sediments. Classification of sediments. Environments of sedimentation - Non marine, Transitional and Marine. Processes in sedimentation: transportations, diagenesis and chemical influences. Texture of the detrital sediments: Grain size analysis, roundness, sphericity, surface textures. Sediment texture in environmental impact assessment.

Unit 2. Coastal Oceanography: Wind, waves and swells. Wave refraction, diffraction and reflection. Wave breakers. Littoral currents - long shore and rip currents. Surf scaling factors. Land and sea breeze. Tides and tidal currents.

Unit 3. Coastal Geomorphology. Coastal geomorphological system. Evolution of the coast in relation to sea level changes. Geomorphology of the coast - Depositional viz. Beach, Spit, Cusps, Ridge, Runnel, lagoon, mangroves, coastal dunes, organic reef and Erosion viz. Cliff, sea stacks, Strand Flats, Terraced. Inter tidal platforms, solution

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## Appendix - D

REGULATIONS FOR POST GRADUATE PROGRAMMES IN THE DEPARTMENTS/  
SCHOOLS OF THE COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

## 1. Scope

1.1. These Regulations shall apply to all the post graduate programmes conducted by the Departments/Schools of the Cochin University of Science and Technology excluding Ph.D., M.Phil and P.G. Diploma and Certificate courses.

1.2 The provisions herein supersede all other Regulations unless otherwise provided.

## 2. Definitions

2.1. Academic Committee means the Committee constituted by the Vice-Chancellor under this Regulation to monitor the running of the programme.

2.2. Core course means a course that the student admitted to a particular programme must successfully complete to receive the Degree and which cannot be substituted by any other course.

2.3. Elective course means a course, which can be substituted by equivalent courses from the same or other Departments/Schools.

2.4. Audited course means a course which will not carry any credit.

2.5. Department/School means Departments/Schools instituted in the University as per statutes and Act.

2.6. Levels of courses in these Regulations will generally mean:

First Level	: for introductory programmes
Second Level	: for graduate programme (Master's Degree)
Third Level	: for post graduate courses.

2.7. Semester and course credit system of teaching should be followed.

## 3. Eligibility

As per the Regulations prescribed by the University from time to time

## 4. Admission

As per the Regulations prescribed by the University from time to time.

## 5. Course Registration

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- 2 -

5.1. Every Department/School shall have Faculty Members as Students' Advisors. Each student at the time of seeking admission will be assigned to an Advisor by the Departmental Council. He will advise the student about the academic programme and counsel on the choice of courses depending on the students academic background and objective. The student will then register for the courses he plans to take for the semester before the classes start. The student has to complete the prerequisites for the course prescribed by the advisor. The student can drop out if he feels that he has registered for more courses that he can handle before 20 days after the commencement of classes.

5.2. The University shall make available to all students a Bulletin listing all the courses offered in every semester specifying the credits, pre requisites, list of topics the course intends to cover, the instructor who is giving the course, the time and place of the classes for the courses and examination schedule. Each course shall have a code consisting of three characters denoting the Department and four digits of which first digit indicating the level of the course, second indicating the level of the course, second indicating the Semester and third and the fourth digits the serial number of the course.

## 6. Course Structure

6.1. There shall be two kinds of courses: Core courses and electives. Core courses should be offered by the Department/School concerned. Normally no course shall have more than four credits except in cases where only project/dissertation including seminars are involved in which case the minimum credit shall be sixteen.

6.2. Total number of credits for the core courses shall not exceed 60 for M.A./M.Sc. 80 for MCA/MBA (F.T. & P.T.), MIB/ 40 for M.Tech. and shall not be less than 48 for M.A./M.Sc./ 72 for MCA/MBA (F.T. & P.T.)/MIB and 36 for M.Tech.

6.3. The department council shall make recommendations on the core and elective courses including the detailed syllabus for each programme offered by the department to the University and after the approval by the Board of Studies and Academic Council shall be included in Schedule II of these Regulations. The Department Council shall have the freedom to design and introduce new electives and or audited courses, to modify/redesign existing electives and to replace any existing electives to facilitate better exposure and training for the students. Prior approval from the Board of Studies and Academic Council is not required for such modifications in the electives,

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but shall be done only with the approval of the Academic Committee. Such changes shall be brought to the notice of the Board of Studies in the next meeting.

6.4. The general structure of the programme shall be as given below:

	M.A/M.Sc.	MCA/MBA (FT & PT)	M.Tech
		MIB	
Programme duration	4 Sem.	6 Sem	3 Sem.
Accumulated minimum credit required for successful completion of the programme	72	108	54
Minimum attendance required	75%	75%	75%

Each semester shall have a minimum of 90 working days and one credit shall be given for one hour lecture or 3 hours of practical work per week. No regular student shall register for more than 24 credits and less than 16 credits per semester.

## 7. Evaluation

- 7.1. The evaluation scheme for each semester contains two parts, an internal assessment and an external examination. Equal weightage shall be given for the internal and external examination.
- 7.2. The existing rules shall apply for the conduct of examinations relating to all courses coming under these regulations.

## 8. Mark Sheet

- 8.1. The University under its seal shall issue to the students a mark sheet on completion of each semester. The mark sheet shall contain the following:
- Title of the course taken and the level of the course.
  - The credits associated with the course.
  - The marks in percent secured by the student for each course.
  - The total credits earned by the student till that semester.
  - The total credits earned by the student till that semester.
  - The total marks in percent as cumulative weighed average of the student.

- 8.2. The following credit system be adopted for all the P.G. Courses, The following Grades will be awarded based on the overall performance in each subject.

Range of marks	Grade	Weightage
90%	S--- Outstanding	10
80% 90	A - Excellent	09
70 80	B - Very Good	08
60 70	C - Good	07
50 60	D - Satisfactory	06
50%	F - Failed	00

Overall performance at the end of the semester will be indicated by Grade point average (GPA) calculated as follows:

$$GPA = \frac{G1C1 + G2C2 + G3C3 + \dots + GnCn}{C1 + C2 + C3 + \dots + Cn}$$

Where 'G' refers to the grade weightage and 'C' refers to the credit value of corresponding course undergone by the student

At the end of the final Semester Cumulative Grade Point Average (CGPA) will be calculated based on the above formula.

Classification for the Degree/Diploma will be given as follows:

Classification	CGPA
First Class with distinction	8 and above
First Class	7 and above
Second Class	6 and above

- 8.3. The mark sheet issued at the end of the final semester shall contain the details of all the courses taken which shall include the titles of the courses, the credits associated with each Course, the marks and the final class in which the student is placed.

- 8.4. In the case of those who do not complete all the course components it will be indicated in the mark sheet as Not Completed. However students will be permitted to complete the course with the concurrence of the Departmental Council.

- 8.5. Those who fail in a particular course shall be permitted to repeat the course after obtaining permission from the Departmental Council.

8.6. For those who have taken audited courses, a certificate signed by the Faculty member and the Head of the Department to this effect shall be issued.

#### 9. Departmental Council

9.1. Every P.G. Programme conducted in the University shall be monitored by the Departmental Council. Subject to these regulations the Departmental Council shall design courses, prescribe the mode of conducting the courses and evaluate the students and teachers. At the end of every semester the Departmental Council shall finalise the results of the students for the semester and report to the Academic Committee.

#### 10. Academic Committee

10.1. There shall be an Academic Committee constituted by the Vice-Chancellor to monitor and co-ordinate the working of the Credit and Semester System.

10.2 The Committee shall consist of:

- |                                      |           |
|--------------------------------------|-----------|
| a) The Pro-Vice-Chancellor           | Chairman  |
| b) The Registrar                     | Secretary |
| c) Controller of Examinations        |           |
| d) One Teacher from each Department. |           |

10.3. A Senior Professor nominated by the Vice-Chancellor from among the members of the Committee shall be the Vice Chairman of the Committee.

10.4. The term of the Office of the Committee shall be two years, but the Committee once constituted shall continue in office until a reconstituted committee assumes office.

#### 11. Transitory Provision.

Notwithstanding anything contained in these regulations, the Vice-Chancellor shall, for a period of one year from the date of coming into force of these regulations, have the power to provide by order that these regulations shall be applied to any programme with such modifications as may be necessary.

#### 12. Repeal

The Regulations now in force in so far as they are applicable to programmes offered in the University Departments and to the extent they are inconsistent with these Regulations are hereby repealed. In the case of any inconsistency between the existing regulations and the regulations relating to the Credit and Semester System in their application to any course offered in a University Department, the latter shall prevail.

### GUIDELINES FOR EFFECTING THE CHANGE OF COURSE OF STUDENTS

#### IN AN ENGINEERING COLLEGE IN THE BEGINNING OF IIIrd

#### SEMESTER (IInd YEAR)

Title : Guidelines for effecting the Change of course of students in an Engineering College

Taking into consideration, provisions made by various State Governments, various Legal Proceedings on the above subject and in pursuance of the decision of the Hon'ble High Court of Karnataka in ILR 2001 KAR 1864 in WP No.38423-427/2000 and etc. dated 7.2.2001, the All India Council for Technical Education (AICTE) hereby makes the following guidelines. These guidelines shall be called as the Guidelines for effecting change of branch at IIIrd Semester (IInd year) level.

1. Branch change at the college level shall be carried out by the Director/Principal of the college.
2. Facility of branch change at the IInd year (IIIrd Semester) level shall be available only to meritorious students and shall not to be considered as a matter of right.
3. These guidelines shall be applicable to all institutions, imparting Engineering education in the country including University Departments, RECS, autonomous institutes, aided as well as un-aided institutions.
4. Branch change is permitted at IIIrd Semester (IInd year) only.
5. For the purposes of branch change, the "prescribed intake" shall be the intake prescribed by AICTE for the previous academic session when the students were admitted at 1st Semester level. Subsequent variations in intake shall have no bearings on the students eligible for branch change.
6. Branch Change is permitted, if the strength in any Branch is not falling below 75% of the prescribed intake.
7. Branch change can be made only against clear vacancy in a particular branch. Vacancy (V) being defined as :



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$$V = I - (\text{Reg} + \text{Rep})$$

Where I = The prescribed intake for the branch.

Reg= No. of regular students who become eligible to be promoted to IIIrd Semester.

Rep= No. of students from previous batches who become eligible to join IIIrd Semester (along with regular students)

Branch change shall not be permitted to any course where (Reg + Rep) I. Under no circumstances, there shall be any exception to the above stipulation.

8. Branch change shall be strictly according to the Merit list prepared by the college on the basis of total marks obtained by a student in 1st year University Examination. Only those students who have passed in all the subjects shall be eligible to apply for change of branch.
9. Change of branch should be completed within 10 days of announcement of I & II Semester (1st year) results.
10. Consolidated lists showing the branch change as per above guidelines be sent to DTE and to the University.
11. Excess intake in any branch shall disentitle the college to effectuate any branch change in that discipline, until the punitive measures, such as reduction in intake etc. as imposed by AICTE is effective.
12. State/University shall ensure that AICTE is kept informed of any violations in implementing these guidelines or excess admissions made by the College.
13. College/Student shall not be entitled to any relief if the guidelines mentioned above for permitting branch change are not strictly adhered to.

The above guidelines comes into effect from the academic year 2001-2002.

By ORDER  
MEMBER SECRETARY  
A.I.C.T.E

Dated : 30-08-2001.

-//True Copy//-

Appendix to Item No.446.36

APPENDIX - IV

## FACULTY OF ENVIRONMENTAL STUDIES

### 1.0.0 Regulations for the B.Sc Degree Course - Environmental Technology

- 1.1.1 Candidates for admission to the post-graduate course in Environmental Technology shall be required to have passed (i) the Bachelor's degree examination in Chemistry with Physics and Mathematics as subsidiaries or Civil Engineering, Public Health Engineering, Environmental Engineering or Chemical Engineering (for specialization in Environmental Engineering) OR (ii) a Bachelor's degree examination in Life Science/Environmental Science/Zology/Botany/Microbiology (for specialization in Environmental Biotechnology) of any of the Universities in Kerala or have obtained an equivalent degree of any other University recognized by the Syndicate of CUSAT.

The Candidate should have obtained a minimum of 55% (50% in the case of SG and ST candidates) marks in the optional subjects in the qualifying examination, and a valid score in the Common Admission Test (CAT) conduct by the University.

- 1.1.2 All eligible candidates shall have a valid common Admission Test (CAT) score for admission.

- 1.1.3 Admission will be made on the basis of a Common Admission Test and the candidate has to take the CAT in the main subject of his/her Bachelor's degree or in a subject of his choice among the main subjects if he/she has undergone the bachelor's degree studies in multiple main schemes.

The rank list for admission to the course shall be prepared on the basis of the performance of the candidates in the CAT

- 1.1.4 Candidates who are appearing for the final semester/year examination shall also be eligible to apply for admission to the course subject to the following conditions:

(i) only candidates who have completed the course and are appearing for the qualifying examination shall be permitted to join the course.

(ii) the candidates shall produce at the time of admission a certificate from the Head of the Institution last attended to the effect that he/she has completed the course and has appeared/is appearing for the qualifying examination in full. The Candidate will be permitted to register for the University Examination only after producing evidence of having passed the qualifying examination in his/her first attempt with the minimum marks prescribed above for admission.

If any candidate fails to pass the qualifying examination in the first attempt with the minimum marks prescribed above before the scheduled commencement.

of the I semester University Examination of the course, he/she shall not be permitted to continue the course.

1.1.5 No admission shall be made after a lapse of 15 working days from the date of commencement of the Ist semester classes.

1.1.6 Matters concerning admission procedure, payment of fees etc. will be governed by rules and regulations framed by the University from time to time.

1.1.7 The total number of seats for the two streams together i.e. (i) Environmental Engineering, and (ii) Environmental Biotechnology shall be limited to 10 excluding 2 seats reserved for sponsored candidates; one for physically handicapped and one for foreign national. The number may be enhanced at a later time based on the availability of facility and demand.

#### 1.2.0 COURSE OF STUDY

The course work for the Master of Science Degree in Environmental Technology shall be in accordance with the Syllabi and Scheme of Examination prescribed.

1.2.1 The course shall comprise of four semesters, each of 18-20 weeks duration extending over two calendar years.

1.2.2 The minimum attendance required by a candidate to appear for the University Examination to be conducted at the end of each semester shall be seventy five percent of the working days.

#### 1.3.0 ELIGIBILITY FOR THE AWARD OF M.Sc DEGREE IN ENVIRONMENTAL TECHNOLOGY

1.3.1 A candidate shall be eligible for the Master of Science Degree in Environmental Technology if she/he has undergone the prescribed course of study at the School of Environmental Studies under the University for the stipulation period and passed all the prescribed examinations.

1.3.2 Non-Engineering candidate opting specialization in Environmental Engineering shall qualify an engineering induction course before the commencement of the third semester.

#### 1.4.0 EXAMINATIONS

1.4.1 There shall be a University Examination at the end of each semester in subjects prescribed under the scheme of Examination. Every candidate shall take the examination at the end of each semester.

1.4.2 The maximum marks awarded for each theory paper shall be 100.

1.4.3 Of this fifty percent shall be awarded through semester examination conducted by the University at the end of the Semester present shall be awarded as sessional marks through a process of continuous internal assessment involving written tests, assignments, participation in discussions and seminars to be prescribed by the departmental council at the beginning of the semester.

1.4.4 Under the semester system, there will be no supplementary examinations for I and II Semesters.

1.4.5 Candidates who have completed the course requirements of a semester shall be eligible to attend the ensuing semesters. The total number of chances to appear for examination in a particular subject/paper shall be limited to four.

1.4.6 The marks awarded through internal assessment for a paper shall be carried over, if a candidate has to repeat the examination in that particular subject.

1.4.7 If a candidate secures less than fifty percent of marks allotted for internal assessment, the candidate may be permitted to attend that particular paper and appear for internal assessment for improving the marks.

1.4.8 Readmission for a particular semester, including for purpose of improving the internal assessment marks will be as per University Rules.

1.4.9 There shall be a project Assignment Committee for each stream of specialisation, consisting of faculty who are taking classes in subjects coming under that stream. Each Committee will be responsible for identifying institutes/industries for carrying out projects and for assigning institutes to students coming under its purview.

1.4.10 Every candidate has to carry out a project work on a topic relevant to his/her specialization in the course in an industry/research laboratory of repute/in this school.

1.4.11 The institute/industry where the project work is to be carried out by a candidate and the topic of his/her project work shall be assigned at the commencement of the 3rd Semester.

1.4.12 Every candidate shall be required to submit three copies of the dissertation prepared by him/her duly certified by the External supervisor and Internal Advisor (Guide) at the end of the 4th Semester.

1.4.13 Each dissertation will be valued by the guide and one external examiner appointed by the Pro-Vice-Chancellor from a panel prepared by the project Assignment Committee.

### 1.5.0 PROMOTION RULES AND CLASSIFICATION OF RESULTS

The performance of candidates shall be assessed and graded by a credit system. Credit system will be followed for the M.Sc Environmental Technology courses for evaluating the performance of candidates. The credit requirements, promotion rules and Grade point classification are given below:

#### 1.5.1 Credit requirements and promotion rules:

The course consists of academic work spanning to four semester each semester with 90 working days. Credit system will be adopted for evaluating the performance of candidates. Student shall be declared to have successfully completed the requirements for the award of the M.Sc Degree in Environmental Technology with appropriate specialisation, if he/she completes the course work within four consecutive semesters (two academic years) and acquires a total of 140 credits. The credit allocation for the curricular work is shown in the section on Course structure.

A student shall be declared to have successfully completed the course if he/she satisfies the requirements of attendance as prescribed by the University, secures a minimum of 50% in the internal assessment and University Examination put together in the subject/course, and completes other examination parameters in all the prescribed subjects. A student who secures not less than 50% in a subject putting together the internal assessment and the University examination marks, and acquires the credit requirements of the subject course shall be declared to have successfully completed the subject/course.

Grades will be assigned per subject/course taking the following weightage points for performance in each subject.

Percentage of marks	Grade	Meaning	Grade point
90	E	Excellent	4
90 75	A	Good	3
75 60	B	Average	2
60 50	C	Poor	1
50	D	Fail	0

Grade point Average (GPA) will be awarded to the candidate as follows:

$$GPA = C_1P_1 + C_2P_2 + \dots + C_n P_n / C$$

where  $C_1$  is the credit allowed to the subject,  $P_1$  is the grade point acquired by performance and  $C$  is the total number of credits allotted to the semester concerned.

Cumulative GPA will be awarded to the student by calculating the weighted GPA over all the semesters.

#### 1.5.1.2 Classification

A student who acquired all the credits for the award of the degree will be classified as follows:

CGPA (Cumulative Grade Point Average)

3 and above	1st class with distinction
CGPA 2 and below 3	1st class
CGPA 1 and below 2	2nd class
CGPA below 1	Fail

1.5.2 A candidate who secures a minimum of 50% of the total marks in the University examination and in the internal assessments put together in each subject shall be declared to have passed the examination in that subject.

1.5.3 A candidate who qualified for the degree by passing all the prescribed courses in all the examinations of all the four semesters within a period of four semesters from the commencement of the course of study in the first chance and securing an aggregate of 75% marks and above of the grand total marks of all the semesters shall be declared to have passed in first class with distinction.

1.5.4 A candidate who qualified for the award of the degree by passing all the prescribed courses in all semester examinations within a period of four semesters from the commencement of the course and secures an aggregate of 60% marks and above shall be declared to have passed in first class.

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1.5.5 All other successful candidates shall be declared to have passed in second class.

1.5.6 There will be no third class and a candidate securing less than 50% marks in aggregate shall be declared to have failed.

#### 1.6.0 COURSE STRUCTURE AND CREDIT/MARK DISTRIBUTION

##### 1st Semester

Course Number	Subject	Hrs week	Credit	Internal	External	Total
ET 101	Environmental Biology	3	6	50	50	100
ET 102	Chemistry of the Environmental	3	6	50	50	100
ET 103	Physical processes in the Environment	3	6	50	50	100
ET 104	Environmental Microbiology	3	6	50	50	100
ET 105	Statistics and Computer Applications	3	6	50	50	100
ET 106	Environmental Chemistry of Lab	6	3	50		50
ET 107	Environmental Physics & Environmental Geology lab	3	2	50		50
ET 108	Environmental Microbiology lab	6	3	50		50
ET 109	Seminar/Activity/Viva-voce	3	2	50		50
Total for 1st Semester		33	40	450	250	700

##### 2nd semester

ET 201	Chemical Methods in Environmental Analysis	3	6	50	50	100
ET 202	Environmental Economics and Environmental Laws	3	6	50	50	100
ET 203	Environmental Engineering	3	6	50	50	100

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		1	2	3	4	5	6	7
ET 204	Environmental Toxicology and Biochemistry	3	6	50	50	100		
ET 205	Introduction to Environmental Management	3	6	50	50	100		
ET 206	Environmental Engineering Lab	6	3	50				50
ET 207	Chemical Methods in Environmental Analysis Lab	6	3	50				50
ET 208	Environmental Toxicology and Biochemistry Lab	3	2	50				50
ET 209	Seminar/Minor project and Viva-voce	3	2	50				50
TOTAL FOR 2nd SEMESTER		33	40	450	250	700		

#### 3rd SEMESTER- SPECIALIZATION- ENVIRONMENTAL BIOTECHNOLOGY

EB 301	Applied Environmental Microbiology	3	6	50	50	100		
EB 302	Environmental Biotechnology	3	6	50	50	100		
EB 303	Ecotoxicology	3	6	50	50	100		
EB 304	Biodiversity and conservation	3	6	50	50	100		
EB 305	Theory and practice of Bioremediation	3	6	50	50	100		
EB 306	Microbial Technology Lab	6	3	50				50
EB 307	Ecotoxicology Lab	6	3	50				50
EB 308	Ecology & Biodiversity Lab	6	2	50				50
EB 309	Seminar/Activity/Viva-voce	2	2	50				50
TOTAL FOR 3rd SEMESTER		35	40	450	250	700		

#### 3RD SEMESTER - SPECIALIZATION - ENVIRONMENTAL ENGINEERING

EE 311	Fundamentals of process Analysis	3	6	50	50	100		
EE 312	Physicochemical Methods in Environmental Engg.	3	6	50	50	100		
EE 313	Biological Methods in Environmental Engg.	3	6	50	50	100		

1	2	3	4	5	6	7
EE 314	Water quality Management	3	6	50	50	100
EE 315	Environmental Management	3	6	50	50	100
EE 316	Environmental Engineering Lab I	6	3	50		50
EE 317	Environmental Engineering Lab II	6	3	50		50
EE 318	Water quality lab	6	2	50		50
EE 319	Seminar/Activity/Viva-voce	2	2	50		50
TOTAL FOR 3rd SEMESTER		35	40	450	250	700

#### 4th SEMESTER

EB 401/EE 411	Dissertation	10		150	150
EB 402/EE 412	Seminar	5	75		75
EB 403/EE 413	Viva-voce	5	75		75
TOTAL FOR 4th SEMESTER		20	150	150	300

GRAND TOTAL

2400

Distribution of Marks: University Examination 50%

Internal Assessment 50%

Grand Total	2400
Pass Mark	50% 1200
First Class	60% 1440
First Class with Distinction	75% 1800

Marks awarded for seminar/activity/viva-voce/minor project and laboratory(practical) are based on internal assessment. There will be no external examination for laboratory/minor project work.

#### 1.7.0 REVISION OF REGULATION AND CURRICULUM

Cochin University of Science and Technology, from time to time, revise, amend or change the regulations, Scheme of examination and syllabus. In the case of students who are already undergoing the course, the changes will take effect from the beginning of the following year after the changes are introduced, and shall cover the part of the course if any, that remains to be completed.