

Centre for Continuing Education

(CCE-Proficience Programme)

Indian Institute of Science, Bengaluru — 560012, Karnataka, India Ph: 080-22932508, 22932055 Fax: 080-23600911

E-mail: cce.prof@iisc.ac.in, so.cce@iisc.ac.in Website: cce.iisc.ac.in/Proficience



SCHEDULE FOR THE TERM JANUARY – MAY 2019

L. Innovative Product Development and Design Methods (Mon)	nt
Project Wanagement (Worl) Prof. TVP Chowdry CGFL & CS) Campus
Sastes of Nanoscience and Asnotecinology (Mon-Wed) 3+0 Shrivastava CeNSE	Т
4. Commercializing Intellectual Property (IP) (Tue) 5. Foundations of Internet of Things (Tue) 6. Design Thinking and Innovation (Tue) 7. Analysis and Design of Composite Structures (Tue) 8. Mathematical Models and Algorithms for Image Processing & Computer Vision (Tue) 9. Business Analytics with Management Science Models and Methods (Tue-Thur) 10. Embedded System on ARM Platform (Wed) 11. Vibration and Noise: Theory and Practice (Wed) 12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 13. Internet of Things: Sensors to Cyber Systems (Thur) 14. Modern Techniques in Materials Characterization (Thur) 15. Deep Learning: Theory and Practice (Thur) 16. Online Course on Deep Learning: Theory and Practice (Fri) 17. Product Prototyping in IoT (Thur) 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Entroduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. CeNSE (Sat) 27. Por R. Vidyasuagar 28. Mathematical Medical Characterization: Theory and Practice (Fri) 29. Prof. R. P. Vidyasuagar 29. Prof. R. P. Vidyasuagar 29. Prof. R. Sekhar 20. Prof. R. Sekhar 20. Prof. R. Sekhar 21. Onlinear Finite Element Method (Sat) 24. Dr. R. Vidhyasuagar 25. Reinforcement Learning (Sat) 26. CeNSE (CPDM. NID R&D (CPDM. NID R	
6. Design Thinking and Innovation (Tuc) 7. Analysis and Design of Composite Structures (Tue) 8. Mathematical Models and Algorithms for Image Processing & Computer Vision (Tue) 9. Business Analytics with Management Science Models and Methods (Tue-Thur) 10. Embedded System on ARM Platform (Wed) 11. Vibration and Noise: Theory and Practice (Wed) 12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 13. Internet of Things: Sensors to Cyber Systems (Thur) 14. Modern Techniques in Materials Characterization (Thur) 15. Deep Learning: Theory and Practice (Thur) 16. Online Course on Deep Learning: Theory and Practice (Thur) 17. Product Prototyping in IoT (Thur) 28. Structural Analysis and Design Optimization: Theory and Practice (Fri) 29. Dr. S B Kandagal 20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Osalabh Bhatnagar 27. CPDM & NID R&D 26. Or. JE Diwakar (Retd.) & Prof. A. Chutha Rao, (Retd.) & Prof. M. Salabh Bhatnagar 28. Reinforcement Learning (Sat) 29. Reinforcement Learning (Sat) 20. Shalabh Bhatnagar 20. Shalabh Bhatnagar 21. Online Course on Basics of Data Analytics (Sat) 22. Reinforcement Learning (Sat) 23. Reinforcement Learning (Sat) 24. Shalabh Bhatnagar 25. Reinforcement Learning (Sat)	
CPDM & NID Ref. Prof. P. Achutha Rao (Red.) CPDM & NID Ref.	
8. Mathematical Models and Algorithms for Image Processing & Computer Vision (Tue) 9. Business Analytics with Management Science Models and Methods (Tue-Thur) 3+0 Dr. M Mathirajan MS 10. Embedded System on ARM Platform (Wed) 2+0 Mr. Haresh Dagale DESE 11. Vibration and Noise: Theory and Practice (Wed) 2+0 Dr. S B Kandagal AE 12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 2+0 Dr. P S Kulkarni AE 13. Internet of Things: Sensors to Cyber Systems (Thur) 2+0 Dr. Suresha S J CeNSE 14. Modern Techniques in Materials Characterization (Thur) 2+0 Dr. Suresha S J CeNSE 15. Deep Learning: Theory and Practice (Thur) 2+0 Dr. Sriram Ganapathy EE 16. Online Course on Deep Learning: Theory and Practice (Thur) 2+1 Dr. Sriram Ganapathy EE 17. Product Prototyping in IoT (Thur) 2+0 Dr. S B Kandagal AE 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 2+0 Dr. S B Kandagal AE 19. Basics of Finite Element Analysis (Fri) 2+0 Dr. R Vidhyasagar Civil Engineer 20. Basics of Data Analytics (Sat) 2+0 Dr. R Vidhyasagar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 21. Online Course on Basics of Data Analytics (Sat) 2+0 Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 2-1 Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 2-2 Nonlinear Finite Element Method (Sat) 2+0 Dr. R N Narahari CeNSE 2-2 Introduction to Industrial Design (Sat) 2-3 IPR Management (Sat) 2-40 Dr. R N Narahari CeNSE 2-40	D Campus
9. Business Analytics with Management Science Models and Methods (Tue-Thur) 10. Embedded System on ARM Platform (Wed) 11. Vibration and Noise: Theory and Practice (Wed) 12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 13. Internet of Things: Sensors to Cyber Systems (Thur) 14. Modern Techniques in Materials Characterization (Thur) 15. Deep Learning: Theory and Practice (Thur) 16. Online Course on Deep Learning: Theory and Practice (Thur) 17. Product Prototyping in IoT (Thur) 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Mr. Haresh Dagale Dr. M Mathirajan MS Dr. S B Kandagal AE Dr. S B Kandagal AE Dr. S Is Kandagal AE CeNSE CeNSE CeNSE & Founder & Gene Engr. Tech Pvt. I Dr. S Is Kandagal AE Cense & Gen Engr. Tech Pvt. I Dr. R Vidhyasagar Civil Engineering, & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. Gitam U Prof. Gitam U Prof. Gitam U Prof. P. Achutha Rao, (Retd.)	
DESE DESE	
11. Vibration and Noise: Theory and Practice (Wed) 2+0 Dr. S B Kandagal AE 12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 2+0 Dr. P S Kulkarni AE 13. Internet of Things: Sensors to Cyber Systems (Thur) 2+0 Dr. Vijay Mishra CenSE 14. Modern Techniques in Materials Characterization (Thur) 2+0 Dr. Suresha S J CenSE 15. Deep Learning: Theory and Practice (Thur) 2+0 Dr. Sriram Ganapathy EE 16. Online Course on Deep Learning: Theory and Practice (Thur) 2+1 Dr. Sriram Ganapathy EE 17. Product Prototyping in IoT (Thur) 2+0 Dr. Vijay Mishra & Mr Ganesh Hassan Gen Engg. Tech Pvt. I 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 2+0 Dr. S B Kandagal AE CenSE & Founder & Gen Engg. Tech Pvt. I 19. Basics of Finite Element Analysis (Fri) 2+0 Dr. S B Kandagal AE Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Fiserv India I Altair Engineering, & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Bodarinath Ambati & Pr	
12. Introduction To Numerical Grid Generation & Fluid Flow Computations (Wed) 2+0 Dr. P S Kulkarni AE 13. Internet of Things: Sensors to Cyber Systems (Thur) 2+0 Dr. Vijay Mishra CeNSE 14. Modern Techniques in Materials Characterization (Thur) 2+0 Dr. Suresha S J CeNSE 15. Deep Learning: Theory and Practice (Thur) 2+0 Dr. Sriram Ganapathy EE 16. Online Course on Deep Learning: Theory and Practice (Thur) 2+1 Dr. Sriram Ganapathy EE 17. Product Prototyping in IoT (Thur) 2+0 Dr. Vijay Mishra & Mr Ganesh Hassan Gen Engg. Tech Pvt. J 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 2+0 Dr. R Vidhyasagar Civil Engineer 19. Basics of Finite Element Analysis (Fri) 2+0 Dr. R Vidhyasagar Civil Engineer 20. Basics of Data Analytics (Sat) 2+0 Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar Dr. Badarinath Ambati & Prof. M	
13.Internet of Things: Sensors to Cyber Systems (Thur)2+0Dr. Vijay MishraCeNSE14.Modern Techniques in Materials Characterization (Thur)2+0Dr. Suresha S JCeNSE15.Deep Learning: Theory and Practice (Thur)2+0Dr. Sriram GanapathyEE16.Online Course on Deep Learning: Theory and Practice (Thur)2+LDr. Sriram GanapathyEE17.Product Prototyping in IoT (Thur)2+0Dr. Vijay Mishra & Mr Ganesh HassanCeNSE & Founder & Gen Engg. Tech Pvt. I18.Structural Analysis and Design Optimization: Theory and Practice (Fri)2+0Dr. R VidhyasagarCivil Engineer19.Basics of Finite Element Analysis (Fri)2+0Dr. R VidhyasagarCivil Engineer20.Basics of Data Analytics (Sat)2+0Dr. Badarinath Ambati & Prof. M SekharFiserv India I Altair Engineering, & Prof. M Sekhar21.Online Course on Basics of Data Analytics (Sat)2+LDr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M SekharFiserv India I Altair Engineering, & Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar22.Nonlinear Finite Element Method (Sat)2+0Prof. P C Pandey (Retd.) IISc.Distinguishe Prof. Gitam U23.IPR Management (Sat)2+0Dr. R N NarahariCeNSE24.Introduction to Industrial Design (Sat)3+0Prof. P. Achutha Rao, (Retd.) & Prof. Prof. P. Achutha Rao, (Retd.) & Prof. Prof. P. Achutha Rao, (Retd.) & Prof. TVP Chowdry25.Reinforcement Learning (Sat)3+0Shalabh BhatnagarCSA	
14.Modern Techniques in Materials Characterization (Thur)2+0Dr. Suresha S JCeNSE15.Deep Learning: Theory and Practice (Thur)2+0Dr. Sriram GanapathyEE16.Online Course on Deep Learning: Theory and Practice (Thur)2+LDr. Sriram GanapathyEE17.Product Prototyping in IoT (Thur)2+0Dr. Vijay Mishra & Mr Ganesh HassanCeNSE & Founder & Gen Engg. Tech Pvt. I18.Structural Analysis and Design Optimization: Theory and Practice (Fri)2+0Dr. R VidhyasagarCivil Engineer19.Basics of Finite Element Analysis (Fri)2+0Dr. R VidhyasagarCivil Engineer20.Basics of Data Analytics (Sat)2+0Dr. Gopal Krishna Sharma, Prof. M SekharFiserv India I Altair Engineering, & Altair Engineering, & Prof. M Sekhar21.Online Course on Basics of Data Analytics (Sat)2+LDr. Badarinath Ambati & Prof. M SekharFiserv India I Altair Engineering, & Dr. Gopal Krishna Sharma, Prof. M Sekhar22.Nonlinear Finite Element Method (Sat)2+0Prof. P C Pandey (Retd.) IISc.Distinguishe Prof. Gitam U23.IPR Management (Sat)2+0Dr. R N NarahariCeNSE24.Introduction to Industrial Design (Sat)3+0Shalabh BhatnagarCPDM, NID R&D C25.Reinforcement Learning (Sat)3+0Shalabh BhatnagarCSA	
15. Deep Learning: Theory and Practice (Thur) 2+0 Dr. Sriram Ganapathy EE	
16. Online Course on Deep Learning: Theory and Practice (Thur) 2+L Dr. Sriram Ganapathy EE	
17. Product Prototyping in IoT (Thur) 2+0 Dr. Vijay Mishra & Mr Ganesh Hassan 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 2+0 Dr. S B Kandagal AE 19. Basics of Finite Element Analysis (Fri) 2+0 Dr. R Vidhyasagar Civil Engineer 20. Basics of Data Analytics (Sat) 2+0 Dr. Badarinath Ambati & Prof. M Sekhar Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 27. Signal Fried Port (Fri) 28. Dr. J E Diwakar, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. TVP Chowdry 25. Reinforcement Learning (Sat) 36. Shalabh Bhatnagar CENSE COPDM, NID R&D COST	
17. Product Prototyping in 161 (Thur) 18. Structural Analysis and Design Optimization: Theory and Practice (Fri) 19. Basics of Finite Element Analysis (Fri) 20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Dr. R Vidhyasagar Civil Engineer Civil E	
19. Basics of Finite Element Analysis (Fri) 20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Dr. R Vidhyasagar 27. Dr. Gopal Krishna Sharma, Prof. M Sekhar 28. Dr. Gopal Krishna Sharma, Por. Badarinath Ambati & Prof. M Sekhar 29. Prof. P C Pandey (Retd.) IISc. 20. Dr. R N Narahari 20. Distinguishe Prof. Gitam U 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Dr. J E Diwakar, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. TVP Chowdry CPDM, NID R&D (CST) CST CST	
20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Dr. Gopal Krishna Sharma, Prof. M Sekhar 27. Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 28. Prof. M Sekhar 29. Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 29. Dr. Badarinath Ambati & Prof. M Sekhar 20. Prof. P C Pandey (Retd.) IISc. 20. Distinguished Prof. Gitam U 20. Dr. J E Diwakar, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. P. Achutha Rao, (Retd.) Prof. TVP Chowdry 20. Shalabh Bhatnagar 20. Dr. J E Diwakar, (Retd.)	
20. Basics of Data Analytics (Sat) 21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Dr. Badarinath Ambati & Prof. M Sekhar 27. Dr. Gopal Krishna Sharma, Dr. Badarinath Ambati & Prof. M Sekhar 28. Prof. M Sekhar 29. Dr. P C Pandey (Retd.) IISc. 20. Distinguishe Prof. Gitam U 20. Dr. R N Narahari 21. Dr. J E Diwakar, (Retd.) 22. Prof. P. Achutha Rao, (Retd.) 23. Introduction to Industrial Design (Sat) 24. Shalabh Bhatnagar 25. Reinforcement Learning (Sat) 26. Shalabh Bhatnagar 27. Dr. Badarinath Ambati & Priserv India Introduction India	ring
21. Online Course on Basics of Data Analytics (Sat) 22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 26. Online Course on Basics of Data Analytics (Sat) 27. Dr. Badarinath Ambati & Prof. M Sekhar 28. Prof. P C Pandey (Retd.) IISc. 29. Dr. R N Narahari Cense CPDM, NID R&D Course CPDM, NID R&D Course CST CST CST CSA	,
22. Nonlinear Finite Element Method (Sat) 23. IPR Management (Sat) 24. Introduction to Industrial Design (Sat) 25. Reinforcement Learning (Sat) 27. Prof. P. Prof. P. Pandey (Retd.) IISC. 27. Prof. P. Prof. P. Prof. Gitam U. 28. Dr. J E Diwakar, (Retd.) 29. Prof. P. Achutha Rao, (Retd.) 20. Prof. P. Achutha Rao, (Retd.) 20. CPDM, NID R&D (CST) 20. Shalabh Bhatnagar 21. CSA	Civil Engg.
24. Introduction to Industrial Design (Sat) 3+0 Dr. J E Diwakar, (Retd.) Prof. P. Achutha Rao, (Retd.) & Prof. TVP Chowdry 25. Reinforcement Learning (Sat) 3+0 Shalabh Bhatnagar CSA	
24. Introduction to Industrial Design (Sat) 3+0 Prof. P. Achutha Rao, (Retd.) & Prof. TVP Chowdry 25. Reinforcement Learning (Sat) 3+0 Shalabh Bhatnagar CSA	
	Campus &
26. DSP-Algorithms, Architecture and Applications (Sat) 2+0 Mr. M Krishna Kumar (Retd.) DESE	
27. Smart Design Methods and Processes in Automotive Industry (Sat) 3+0 Prof. Anindya Deb & CPDM & Founder & Abhiyantara Technology Abhiyantara Technology	
28. Computational Machine Learning (Sat) 3+C Mrs. Anandi Giridharan & Vijay Kumar B P ECE & MSR	IT
29. Basic Concepts of Finite Element Method (Sat) 2+0 Prof. P C Pandey (Retd.) IISc. Distinguished Prof. Gitam U	
30. Basics of Machine Learning (Sat) Dr. Gopal Krishna Sharma, Altair Engineering, Prof. M Sekhar Engg.	,
31. Power System Protection (Sat) 2+0 Dr. Sarasij Das EE	
32. Principles and Applications in Genetic Engineering (Sat) 2+0 Dr. N Ravi Sundaresan MCB	
33. Biopharmaceutical Technology and Drug Development 2+0 Dr. N Ravi Sundaresan MCB	

Details of the courses are available online at cce.iisc.ernet.in and also download CCE app from Google Play Store. Essential Qualification for any course is a degree in Engineering or a postgraduate degree in Science/Humanities as applicable with pre-requisites wherever applicable. Each participant will be admitted for a **Two Courses maximum** of. Applying to courses is strictly through online portal of CCE. Please read all the instructions provided at our portal before applying. Payment of course fee is through payment gateway provided at our online portal and no other means of payment is accepted. The course fee is Rs. 5000/- per credit and registration fee is Rs. 300/- per course. Any other gateway charges must be borne by participant during online payment. For each application, participants must upload (BE,B.Tech/Post Graduation) Convocation/Degree Certificate without fail. (Class conducted: Week days 6PM to 8PM) & (Saturday's 10AM to 4PM)

Some Important Dates: Applying online for courses at CCE online portal	14 th November 2018 31 st December 2018	Wednesday Monday	
Drop Course Information	02 nd January 2019	Wednesday	
Classes Commence from	07 th January 2019	Monday	
Final Exams from to	06 th May 2019 11 th May 2019	Monday Saturday	
Office Working Hours: Monday Through Friday 09.30 Hrs. to 19.00 Hrs., Saturday 's 10.00 Hrs. to 16.00 Hrs.			

Address: Chairman/Coordinator CCE-PROFICIENCE, Lecture Hall Complex, Indian Institute of Science, Bengaluru - 560 012.