

Collaborative Education Agreement
Between
The Regents of The University of Michigan
On behalf of
The University of Michigan-Dearborn, Michigan, USA
And
Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, India

This Collaborative Education Agreement (“Agreement”) is made between the Regents of the University of Michigan on behalf of the University of Michigan-Dearborn (hereafter referred to as “UMD”), whose address is 4901 Evergreen Road, Dearborn, Michigan, 48128, USA, and Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, India, (hereafter referred to as “Vel Tech”), whose address is 400 Feet Outer Ring Road – Avadi, Chennai-600062, India, to share certain administrative responsibilities described herein. The following terms and conditions of this Agreement shall be observed.

1. Agreement

- 1.1 Vel Tech and UMD wish to establish a collaborative education initiative defined as the **Masters Programs** in which qualified Vel Tech students, after receiving their undergraduate degrees at Vel Tech, will be eligible to apply for admission to selected fields of study at UMD (subject to all applicable UMD admission policies and standards) to satisfy the degree requirements for a graduate program within the College of Arts, Sciences, and Letters (CASL), College of Business (COB), College of Education, Health, and Human Services (CEHHS), or College of Engineering and Computer Science (CECS) and receive the corresponding degree from the University of Michigan-Dearborn upon the recommendation of the faculty at UMD.
- 1.2 Vel Tech and UMD wish to establish a collaborative education initiative defined as **3+2 Program** in which qualified Vel Tech students, after successfully completing the first three (3) years of their undergraduate curriculum at Vel Tech, will be eligible to apply for admission to UMD (subject to all applicable UMD admission policies and standards) for two (2) years (extendable to three (3) years) to finish the following program: during the first year, students admitted as undergraduate guest students will finish a required education curriculum to qualify for their Bachelor’s degree awarded by Vel Tech. They will then be eligible to apply for graduate admission at UMD (subject to all applicable UMD admission policies and standards) to continue their education, satisfy the degree requirements for a graduate program within CASL, COB, CEHHS, or CECS, and receive the corresponding degree from the University of Michigan-Dearborn upon the recommendation of the faculty at UMD.
- 1.3 Vel Tech and UMD wish to establish a collaborative education initiative defined as a **Visiting Program** in which qualified Vel Tech students, after successfully completing at least one (1) year of their curriculum at Vel Tech, will be accepted as guest students into selected fields of graduate or undergraduate study at UMD (subject to all applicable UMD admission policies and

standards) to study for up to one year in a required education curriculum to qualify for their degree awarded by Vel Tech.

- 1.4 The Parties have agreed that the Master's Program, 3+2 Program, and Visiting Program (collectively referred to as the "Collaborative Education Programs") will each be conducted in accordance with the terms and conditions set out in this Agreement.
- 1.5 UMD agrees to offer a scholarship to each Vel Tech student admitted to selected fields of study (subject to all applicable UMD admission policies and standards). Section 5 of this Agreement provides the details of this scholarship.

2. The Master's Program

- 2.1 Qualified students recommended by Vel Tech will be evaluated by UMD and, in accordance with UMD's admission policies and standards, will be considered for admission to a graduate program on an equal basis with all other applicants provided they meet the requirements for admission to UMD. This Agreement does not guarantee acceptance to UMD, and UMD reserves the right of final approval on the admission of any Vel Tech student. Admitted students will continue their studies in the chosen program at UMD following a course of study approved by the faculty of UMD. After successfully completing the appropriate program requirements, each student will receive the corresponding Master's degree from the University of Michigan-Dearborn upon the recommendation of the faculty at UMD.
- 2.2 The Program will comprise two (2) phases as follows:

Phase I

- 2.2.1 Students will be assessed by UMD to determine their qualification for admission to a Master's Program at UMD. Note: English language proficiency is required for admission to graduate programs at UMD, and is typically a score of at least TOEFL 84 (Internet based), IELTS 6.5, or MELAB 80.
- 2.2.2 Graduate application and admission requirements vary across graduate programs for each college and follow these guidelines:
 - **CASL** – GRE and minimum GPA vary across CASL graduate programs. Students must consult the admission requirements published by the specific CASL graduate program for which they intend to apply. See the CASL graduate programs website at <http://umdearborn.edu/casl/gradprograms/> for more details.
 - **COB** – Students need to take either the GMAT or the GRE and typically get a total score of at least 550 in the GMAT (or equivalent GRE score). Students also must have typically earned an undergraduate GPA of 3.0 (on a 4.0 grading scale) based on UMD's approved grade conversion scale.
 - **CEHHS** – GPA requirements vary by CEHHS graduate program and range between 3.0 and 3.3 (on a 4.0 grading scale). See the CEHHS graduate prerequisite website at <http://umdearborn.edu/cehhsgradprereq/> for more details.
 - **CECS** – Students must have typically earned an undergraduate GPA of 3.0 (on a 4.0 grading scale) based on UMD's approved grade conversion scale. See the CECS graduate prerequisite website at <http://umdearborn.edu/cecsgradprereq/> for more

details. See the CECS graduate website at <http://umdearborn.edu/gradbasicreq/> for Bachelor's degree and English proficiency requirements.

- 2.2.3 Students who successfully meet the UMD admission standards pursuant to Sections 2.2.1 and 2.2.2 will be accepted to study at UMD in the Master's Program.
- 2.2.4 UMD will provide accepted students with an official UMD admission letter and issue the initial Form I-20 to assist students in their F-1 visa application process. Vel Tech students shall be responsible for complying with all visa/immigration requirements, laws, and regulations of The United States of America ("USA"), including obtaining and maintaining any visas and/or permits needed for participation in the Master's Program at UMD during the entire term of the Program. UMD shall bear no responsibility for those Vel Tech students who fail to obtain and maintain any visas and/or permits or who fail to comply with the visa/immigration requirements, laws, and regulations of the USA. Each Vel Tech student must keep UMD apprised of any changes in his/her visa status. Once the appropriate F-1 visa is issued and all UMD requirements of enrollment are satisfied, students will be permitted to enroll in UMD. Students who are denied admission to UMD, or who are admitted to UMD but are unable to obtain an F-1 visa to the USA, will be advised to continue their studies elsewhere.

Phase II

- 2.2.5 After completion of Phase I and successfully obtaining an F-1 visa, students will be allowed to enroll at UMD under this Agreement to start Phase II.
 - 2.2.6 Students in Phase II will register as full-time students at UMD and be afforded all the usual privileges of full-time international students studying at UMD in accordance with all applicable laws and regulations.
 - 2.2.7 Upon the student's successful completion of program degree requirements, the appropriate Master's degree will be conferred to the student by the Regents of the University of Michigan upon the recommendation of the faculty at UMD.
- 2.3 UMD welcomes and encourages Vel Tech students to also consider graduate degrees, based on their interest, in fields other than their undergraduate major where possible.

3. The 3+2 Program

- 3.1 The academic program of the 3+2 Program will be implemented and administered in three (3) phases. During Phase I, Vel Tech will select students as candidates for study at UMD under the 3+2 Program. These students will study at Vel Tech to complete the first three (3) years of a four-year Bachelor's program in disciplines mutually agreed to by Vel Tech and UMD. Qualified students recommended by Vel Tech will be evaluated by UMD and, in accordance with UMD's admission policies and standards, considered for admission on an equal basis with all other applicants provided that they meet the requirements for admission to UMD. This Agreement does not guarantee acceptance to UMD, and UMD reserves the right of final approval on the admission of any Vel Tech student. The qualified students admitted to UMD will enter Phase II of

the 3+2 Program in which they will enroll at UMD as undergraduate guest students to continue their undergraduate studies at UMD in a chosen discipline following the required education curriculum for that discipline. Each student, after successful completion of this curriculum, will receive a Bachelor's degree from Vel Tech. They will then enter Phase III of the 3+2 Program in which they will be eligible to apply for admission to UMD (subject to all applicable UMD admission policies and standards) to continue their graduate education. This Agreement does not guarantee acceptance to a graduate program at UMD, and UMD reserves the right of final approval on the admission of any Vel Tech student. Admitted students who satisfy the degree requirements of the selected graduate program will receive the corresponding degree conferred by the University of Michigan-Dearborn upon the recommendation of the faculty at UMD.

- 3.2 UMD welcomes and encourages Vel Tech students to also consider graduate degrees, based on their interest, in fields other than their undergraduate major where possible.
- 3.3 The collaborative 3+2 Program will comprise three (3) phases as follows:

Phase I

- 3.3.1 Three (3) years of study at Vel Tech during which time the students will follow the required education curriculum for a Bachelor's degree in their chosen disciplines.
- 3.3.2 Students who wish to proceed to Phase II will be evaluated by UMD to determine their qualification for admission to UMD. For each student, Vel Tech must certify their English language proficiency by providing one of four test scores: CET-6 480 or above, TOEFL 80 or above, IELTS 6.0 or above, or MELAB 76 or above. For each student, Vel Tech must also certify that they are in good academic standing with a cumulative GPA of 75 or greater (on a 100 point grading scale).
- 3.3.3 Students who pass the evaluation process in 3.3.2 will be admitted to study at UMD under the 3+2 Program. The UMD will provide accepted Vel Tech students with an official UMD admission letter and issue the initial Form I-20 to assist students in the F-1 visa application process. Vel Tech students shall be responsible for complying with all visa/immigration requirements, laws, and regulations of The United States of America ("USA"), including obtaining and maintaining any visas and/or permits needed for participation in the 3+2 Program at UMD during the entire term of the Program. UMD shall bear no responsibility for those Vel Tech students who fail to obtain and maintain any visas and/or permits or who fail to comply with the visa/immigration requirements, laws, and regulations of the USA. Each Vel Tech student must keep UMD apprised of any changes in his/her visa status. Once the appropriate F-1 visa is issued and all UMD requirements of enrollment are satisfied, students will be permitted to enroll in UMD. Students who are denied admission to UMD, or who are admitted to UMD but are unable to obtain an F-1 visa to the USA, will continue their studies at Vel Tech.

Phase II

- 3.3.4 After completion of Phase I, including admission to UMD and successfully obtaining an F-1 visa, students will transfer from Vel Tech to UMD as undergraduate guest students under this Agreement to start Phase II.

- 3.3.5 Students in Phase II will register as full-time students and be afforded all the usual privileges of full-time international students studying at UMD in accordance with all applicable laws and regulations.
- 3.3.6 Students are normally expected to complete a required education curriculum for their Bachelor's degree from Vel Tech within one year.
- 3.3.7 It is the responsibility of each Vel Tech student to ensure that courses they take at UMD will satisfy the required education curriculum for their Bachelor's degree at Vel Tech. It is also the responsibility of each Vel Tech student to ensure that they meet all prerequisites for all UMD classes in which they choose to enroll.
- 3.3.8 For each student, at the student's request, UMD will forward to Vel Tech a transcript listing all courses taken at UMD and the grades earned. If Vel Tech approves these courses and grades as meeting the required education curriculum, Vel Tech will award the graduation certificate and Bachelor's degree to each eligible student.
- 3.3.9 Students shall obtain a notification letter of their completion of their Bachelor's degree from Vel Tech, and Vel Tech will forward an official copy of the letter and transcript to the respective college for all students wishing to enter Phase III of the 3+2 Program.

Phase III

- 3.3.10 After completion of Phase II, once the letter and transcript from Vel Tech are received and evaluated by UMD, students are eligible to enter Phase III.
- 3.3.11 Each student will be evaluated to determine if they meet the admission standards for the relevant graduate degree. Note: English language proficiency is required for admission to graduate programs at UMD, and is typically a score of at least TOEFL 84 (Internet based), IELTS 6.5, or MELAB 80. At its discretion, the designated college may use alternate testing methods at UMD to verify English proficiency of Vel Tech students when they transition from Phase II to Phase III.
- 3.3.12 Students may also need to take the GMAT or the GRE, the minimum required score of which depends on the graduate program to which the student is applying.
- 3.3.13 The GPA requirement for admission to the relevant graduate degree will be based on the GPA the students obtained on at least 12 credit hours of coursework taken at UMD during Phase II of the 3+2 Program. Graduate GPA admission requirements vary across graduate programs. Students must consult the admission requirements published by the specific graduate program for which they intend to apply.
- 3.3.14 Admitted students who satisfy the degree requirements for a graduate program within CASL, COB, CEHHS, or CECS will receive the corresponding degree conferred by the University of Michigan-Dearborn upon the recommendation of the faculty at UMD.

4. The Visiting Program

Being aware of the quality of their respective educational programs, UMD and Vel Tech wish to enter into a student Visiting Program which will be implemented as follows:

- 4.1 The Visiting Program shall be governed by the following rules:
 - 4.1.1 Each year, either university may send to the other university up to sixty (60) full-time undergraduate and/or graduate students to participate in the Visiting Program. It is understood that normally each participant will spend one (1) academic year at the host university.
 - 4.1.2 All students shall remain bona fide students of their home university and be engaged in a degree-oriented course of study at their home university. Participation in the Visiting Program does not confer the right to pursue a degree at the host university.
 - 4.1.3 During their participation in the Visiting Program, students will be responsible for paying the relevant tuition and fees to the host university.
- 4.2 Prospective students will be recommended for the Visiting Program by their home university. Each host university reserves the right to require participants to complete their standard admission forms and to provide any other necessary documents. This Agreement does not guarantee acceptance into UMD, and Vel Tech students will be considered for admission on an equal basis with all other applicants provided they meet the prerequisites and requirements for admission to UMD. UMD reserves the right of final approval on the admission of a student.
- 4.3 For each student, Vel Tech must certify their English language proficiency by providing one of four test scores: CET-6 480 or above, TOEFL 80 or above, IELTS 6.0 or above, or MELAB 76 or above. For each student, Vel Tech must also certify that they are in good academic standing with a cumulative GPA of 75 or greater (on a 100 point grading scale).
- 4.4 The host university agrees to provide appropriate documentation to the home university about each student's performance upon completion of the Visiting Program.
- 4.5 The home university will determine, prior to a student's enrollment in the Visiting Program, a course plan at the host university, for each student, as well as the appropriate number of credits to be transferred back to the home university.
- 4.6 For each Vel Tech student admitted to study at UMD under the Visiting Program, UMD will provide an official UMD admission letter and issue the initial Form I-20 to assist students in the F-1 visa application process. Vel Tech students shall be responsible for complying with all visa/immigration requirements, laws, and regulations of The United States of America ("USA"), including obtaining and maintaining any visas and/or permits needed for participation in the Visiting Program at UMD during the entire term of the Program. UMD shall bear no responsibility for those Vel Tech students who fail to obtain and maintain any visas and/or permits or who fail to comply with the visa/immigration requirements, laws, and regulations of the USA. Each Vel Tech student must keep UMD apprised of any changes in his/her visa status. Once the appropriate F-1 visa is issued and all UMD requirements of enrollment are satisfied,

students will be permitted to enroll in UMD. Students who are denied admission to UMD, or who are admitted to UMD but are unable to obtain an F-1 visa to the USA, will continue their studies at Vel Tech.

- 4.7 Vel Tech undergraduate students are encouraged to apply for a graduate degree at UMD in their selected fields of study during their participation in the Visiting Program. The admission requirements for graduate programs are the same as described in Phase III for the 3+2 Program students. GPA requirement for admission will be based on the GPA the students obtained during their course studies at UMD during the Visiting Program.
- 4.8 UMD welcomes and encourages Vel Tech students to also consider graduate degrees, based on their interest, in fields other than their undergraduate major where possible.

5. Tuition and Fees

- 5.1 All student tuition and fees for studies at UMD will be established and collected by UMD. Vel Tech shall have no claim to these monies, and waives all rights to commission of student fees paid to UMD.
- 5.2 Students will be responsible for all costs associated with their studies at UMD. These costs shall include, but not be limited to, immigration expenses, travel between China and the USA, travel within the USA, room and board, books, meals, required insurances, and all tuition and prescribed fees assessed by UMD. UMD tuition and fees are subject to change at any time if dictated by the Regents of the University of Michigan.
- 5.3 UMD will provide a scholarship to Vel Tech Program students admitted to UMD in the Master's Program, 3+2 Program, and Visiting Program equal to 80% of the difference between the resident (in-state) and non-resident (out of state) tuition and fees. The scholarship is for two years, with the possibility to extend (with prior approval) for one additional year, for a maximum of three (3) years or six (6) terms.
- 5.4 Students need to maintain a minimum cumulative GPA of 3.0 (on a 4.0 grading scale; calculated only on courses taken at UMD) in order to continue receiving the scholarship. The GPA will be reset to zero when students move from Phase II (undergraduate guest) or to Phase III (graduate) in the 3+2 Program.

6. Medical Costs

All students participating in any of the Collaborative Education Programs will be required to carry adequate health insurance and to provide proof to the host university that their insurance will cover the costs of health care during their Program. If necessary, the host university will assist in obtaining appropriate insurance, but such assistance does not include financial assistance. The health insurance coverage for Vel Tech students hosted at UM must, in the judgment of UM, provide coverage that is at least comparable to the coverage provided by UM's mandatory health insurance plan for international students. In order to be considered "comparable coverage," an insurance plan must, at a minimum, meet all of University of Michigan (Ann Arbor) Health Insurance Standards (which can be found at <http://www.internationalcenter.umich.edu/healthins/waiver.html#standards>). If UM determines such health insurance coverage is not comparable to UM's mandatory health insurance plan for international

students, then Vel Tech students hosted at UM will be required to purchase UM's mandatory health insurance plan for international students. Vel Tech students hosted by UM shall be entitled to use the UM Health Service on the same terms as domestic UM students.

7. Rules and Regulations

All students participating in any of the Collaborative Education Programs will be required to comply with the laws of the host county as well as the rules and regulations and of the host university and their home university. Any breach of host university rules and regulations will be dealt with in accordance with the established policies and procedures of the host university in consultation with the home university.

8. Withdrawal

The host university shall have the right to require a participating student to withdraw from their Program and host university at any time if the student's work or behavior has clearly not met the requirements of the host university. This right will not be exercised without the host university's prior consultation with the home university.

9. Non-Discrimination

Both Parties subscribe to a policy of equal opportunity and do not discriminate on the basis of gender, age, race, ethnicity, national origin, or religion. Both Parties shall abide by these principles in the administration of this Agreement or any Programs under this Agreement, and neither Party shall impose criteria for participation in any of the Collaborative Education Programs that would violate the principles of non-discrimination. In addition, UMD accepts students without regard for sexual orientation (including gender identity and gender expression) in accordance with the policies of the Regents of the University of Michigan.

10. Term and Termination

- 10.1 This Agreement commences as of the date the last institutional signature is secured. The duration of the agreement is five (5) years.
- 10.2 In the fifth year after commencement of this Agreement, the Parties will undertake a joint program assessment. At that time, it will be possible to renew this Agreement for another term of five years unless otherwise agreed as in Section 10.3, below.
- 10.3 This Agreement may be terminated by either Party by providing the other Party with at least six (6) months prior written notice. If the termination date falls during one of the Collaborative Education Program phases, this Agreement will be terminated after the completion date of that phase of that Program.
- 10.4 The Vel Tech Programs Coordinator is Dr. S. Sivaperumal, Director of International Relations who reports to the Vice-President of Vel Tech and communicates with the UMD Programs Coordinator on Vel Tech-UMD Collaborative Education Programs development and implementation. The UMD Program Coordinators for each college are as follows: CASL and CECS, the Dean or a designee of the Dean; COB, the Dean or a designee of the Dean; CEHHS, the

Dean or a designee of the Dean. UMD and Vel Tech Program Coordinators agree to communicate any developments and implementations that will affect the terms and conditions of this Collaborative Education Agreement.

11. Controlling Laws

- 11.1 Before resorting to external dispute resolution mechanisms, the Parties shall attempt to settle any disputes via negotiation in relation to this Agreement.
- 11.2 At all times during which UMD is to perform under this Agreement, UMD's obligation shall be subject to and be controlled by the laws of the United States of America and the State of Michigan. At all times during which Vel Tech is to perform under this Agreement, Vel Tech's obligation shall be subject to and be controlled by the laws of the People's Republic of China.

12. Amendment

This Agreement represents the whole, full, and complete agreement by and between the Parties and supersedes all other agreements between Vel Tech and UMD. No amendments, changes, additions, deletions, or modifications to or of this Agreement shall be valid unless reduced to writing and signed by both Parties.

Signatures:

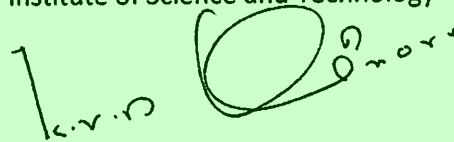
For the Regents of the University of Michigan



Dr. Daniel Little, Chancellor
The University of Michigan-Dearborn

Date: May 16, 2018

For Vel Tech Rangarajan Dr.Sagunthala R&D
Institute of Science and Technology



Dr. Venkata Durga Kishore, Vice-President
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of
Science and Technology

Date: 21 / 5 / 18

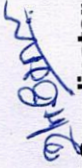


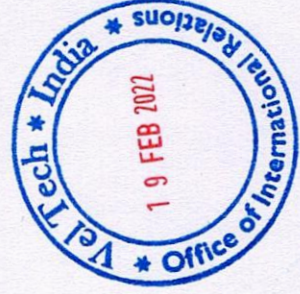
Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
Deemed to be University Estd. u/s 3 of UGC Act, 1956

University of Michigan, Dearborn, USA

Name of the Research Institute/University/ Organization	Country	Duration of the Agreement	Academic Year	Date of Signing	Date of Expiry	Purpose/Activities
University of Michigan - Dearborn	USA	5 Years	2017-18	21.05.2018	20.05.2023	Student Exchange in UG Courses (3+1 and 3+2 Programmes), Guest Programs & Master Progression Programmes

Actual Activities with University of Michigan, Dearborn, USA	
A.Y. 2017-18	Faculty Mobility (Incoming - Short Courses) - 2
A.Y. 2019-20	Faculty Mobility (Incoming - Short Courses) - 3


MoU Coordinator



Dean - International Relations


Dr. P. Suresh
Dean - International Relations

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
Deemed to be University Estd. u/s 3 of UGC Act, 1956



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Electrical & Communication
Department of Electronics & Communication Engineering

Specialized one credit course on
“Digital Control System”
(1157EC901)

by
Prof. Dr. M.Sridhar
University of Michigan, Dearborn & USA



Held on
Date: July 17 to August 4, 2018

THE UNIVERSITY OF MICHIGAN-DEARBORN
Department of Electrical & Computer Engineering

1. Name: Malayappan Shridhar

2. Academic Rank: Professor (FT)

3. Degrees, with fields, institutions and dates:

Ph.D. 1969 University of Aston in Birmingham, U. K.
Electrical Engineering
M.S. 1967 Polytechnic Inst. of New York
Electrical Engineering
D.MIT. 1962 Madras Institute of Technology
Instrumentation and Control,
B.Sc. 1959 University of Bombay
Mathematics

4. Number of years in service on this faculty: 25 years

2007 – Present Professor, ECE and Associate Provost, Academic Affairs
1985 – 2007 Professor and Chair, Electrical and Computer Engineering

5. Other related experience-teaching, administrative, industrial, etc.:

1969 -1985 Faculty Member, Dept. of Electrical Eng., University of Windsor,
Canada
1963 -1966 Scientific Officer, Bhabha Atomic Research Center, Bombay,
India.

6. Consulting:

Diffrauto Ltd., Canada,	General Motors Corporation, USA
CGA-Alcatel, France,	Ford Motor Co, USA,
TRW Inc.	CSC, Oakland, CA
Lear Corp, MI	Kappa Imaging LLC, Oakland, CA

7. State in which registered: Professional Engineer, Province of Ontario.

8. Principal publications of last five years:

- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012
- M. Shridhar, G.F. Houle, Ron Bakker, F. Kimura, “Comprehensive Check Image Reader,” Advances in Digital Document Processing and Retrieval, Statistical Science and Interdisciplinary Research – Vol. 13, 2014, pp. 123-156, 2014
- John W. V. Miller, M. Shridhar, “Illumination-Invariant Image Processing,” Machine Vision Handbook, Springer-Verlag, Vol.1, pp. 543-564, 2012
- M. Shridhar and P. Watta, Chapter: “Pattern Recognition,” Machine Vision Handbook, Springer-Verlag, Vol. 2, Ch. 24, pp 1079-1102, 2012
- John W. V. Miller, M. Shridhar, T. Peatee, “Restoration of Missing Boundary Segments in Shattered Glass,” Machine Vision Handbook, Springer-Verlag, Vol. 2, pp. 1231-1242, 2012

- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012

9. Scientific and professional societies of which a member:

Senior Life Member, IEEE.

10. Honors and awards:

- Distinguished Faculty 1988, Michigan Association of Governing Boards
- Distinguished Research Award, University of Michigan - Dearborn 1994
- Houle, G., Aragon, D., Smith, R., Shridhar, M., Kimura, F. “A Multi-Layer Corroboration-Based Check Reader,” Proc. of IAPR Workshop on Document Analysis Systems, Oct. 14 - 16, 96, Malvern, PA. (BEST PAPER AWARD)

11. Institutional and professional service in the last five years:

- Associate Provost, Academic Affairs 2007-2013
- PEV-ABET
- Peer Reviewer, Higher Learning Commission
- Mentor, HLC Assessment Academy

12. Percentage of time available for research and Scholarly activities

15% of time available for research and scholarly activities.

13.

Term/Year	Percentage of time committed to the program
Fall 2015	37.50%
Winter 2016	75%

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: Digital Control System

Department: Electronics and Communication Engineering

Students: IIIrd year ECE

Training Program date: 17th July to 4th August, 2017

Course Contents:

- Mathematical representation of digital control systems
- Z-transform and difference equations
- Classical and state space methods of analysis and design
- Direct digital control of industrial processes.

IR161

Veltech Dr.RR & Dr.SR University
(Estd. u/s 3 of UGC Act, 1956)

Office of International Programmes
Visiting Professor Programmes

Details of Professor & Course:

Name of the Professor	Prof.M. Sridhar	
University & Country	University of Michigan, Dearborn & USA	
Title of the Course	Digital Control System	No of credits - 1 <i>mark</i>
Department	Electronics & Communication Engineering	
Dates of the Course	17th July to 4th August 2017	
Total No. of Hours	30	
Course Contents	Attached	

Prepared by: *[Signature]*

Coordinator - Office of Intl. Pgms

Forwarded by:

Director - Office of Intl. pgms



[Signature]
HoD

Dean

[Signature]
Director (Academic)

Vice Chancellor

Veltech Dr.RR & Dr.SR University

(Estd. u/s 3 of UGC Act, 1956)

S.Sivaperumal
Director International Relations

Date: 22 JUL 2017

Our Ref. No: 2017/VF11

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: Digital Control System

Department: Electronics and Communication Engineering

Students: IIIrd year ECE

Training Program date: 17th July to 4th August, 2017

Sl. No	Description	Amount in INR
1	Course Honorarium (Rs.3000 * 30Hrs) (Net Amount & Tax Free)	90,000
	Total	90,000

(Rupees Ninety thousand only)

In this regard, I request your approval for transferring the amount to the following Account, as a Honorarium for the course.

Name: Malayappan Shridhar

Bank name: HDFC Bank,

Branch: R.A Puram

Account No: 01411010002212

IFSC Code: HDFC 0000141

Thank You

S.Sivaperumal
22/07/17
S.Sivaperumal
Director International Relations
Veltech Dr.RR & Dr.SR University
(Estd. u/s 3 of UGC Act, 1956)



400 feet Outer Ring Road, Avadi,
Chennai-600 062, Tamil Nadu, India.
Mobile : +91 96000 40255
Email : dint@veltechuniv.edu.in
Website : www.veltechuniv.edu.in

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Grade
1	VTU6393	BALINENI HARIKRISHNA	B.Tech	ECE	1157EC901	Digital Control Systems	NE
2	VTU6002	VELURU JAYANTH BABU	B.Tech	ECE	1157EC901	Digital Control Systems	NE
3	VTU6054	CHARUGUNDLA KALKI SAI GOPAL	B.Tech	ECE	1157EC901	Digital Control Systems	C
4	VTU6437	CHAPPIDI UDAY KUMAR REDDY	B.Tech	ECE	1157EC901	Digital Control Systems	C
5	VTU6062	EKKURTHI UDAY KIRAN NAIDU	B.Tech	ECE	1157EC901	Digital Control Systems	A
6	VTU6144	NAGISETTYGARI KARTHIK	B.Tech	ECE	1157EC901	Digital Control Systems	AB
7	VTU6244	N.SIVA KUMAR REDDY	B.Tech	ECE	1157EC901	Digital Control Systems	S
8	VtU6464	DOKKULURI LAKSHMI VENKATA GOWTHAM	B.Tech	ECE	1157EC901	Digital Control Systems	NE
9	VTU6058	GOGINENI NAGA VIJAYA	B.Tech	ECE	1157EC901	Digital Control Systems	B
10	VTU6138	MANCHALA VENKATESHH	B.Tech	ECE	1157EC901	Digital Control Systems	AB
11	VTU6126	AVILALA AKHIL	B.Tech	ECE	1157EC901	Digital Control Systems	S
12	VTU6295	MUDDANA SAI MANI HEMANTH	B.Tech	ECE	1157EC901	Digital Control Systems	D
13	VTU6136	MANNEM PRADHYUMNA	B.Tech	ECE	1157EC901	Digital Control Systems	C
14	VTU6392	KOVI GOPI	B.Tech	ECE	1157EC901	Digital Control Systems	C



Veltech Dr. RR & Dr. SR University

(Estd. u/s 3 of UGC Act, 1956)

S.Sivaperumal
Director International Relations

Date: 22 JUL 2017

Our Ref. No: 2017/VF11

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: Digital Control System

Department: Electronics and Communication Engineering

Students: IIIrd year ECE

Training Program date: 17th July to 4th August, 2017

Sl. No	Description	Amount in INR
1	Course Honorarium (Rs.3000 * 30Hrs) (Net Amount & Tax Free)	90,000
	Total	90,000

(Rupees Ninety thousand only)

In this regard, I request your approval for transferring the amount to the following Account, *as a Honorarium for the course.*

Name: Malayappan Shridhar

Bank name: HDFC Bank,

Branch: R.A Puram

Account No: 01411010002212

IFSC Code: HDFC 0000141

Thank You,

S.Sivaperumal
22/07/17
S.Sivaperumal
Director International Relations
Veltech Dr. RR & Dr. SR University
(Estd. u/s 3 of UGC Act, 1956)

[Signature]



400 feet Outer Ring Road, Avadi,
Chennai-600 062, Tamil Nadu, India.

Mobile : +91 96000 40255

Email : dint@veltechuniv.edu.in

Website : www.veltechuniv.edu.in



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Computing
Department of Computer Science Engineering

Specialized one credit course on
“Information Retrieval and Text Mining”
(1157CS901)

by
Prof. Dr. William Grosky
University of Michigan, Dearborn & USA



Held on
Date: July 24 to August 12, 2018

William I. Grosky

Address:

Computer and Information Science Department, University of Michigan-Dearborn, Dearborn, Michigan 48128; Tel. (313) 583-6424; Fax (313) 593-4256; E-mail: wgrosky@umich.edu.



Professional Preparation:

MIT, B.S. in Mathematics, 1965.

Brown University, M.S. in Applied Mathematics, 1968.

Yale University, Ph.D. in Engineering and Applied Science, 1971.

Appointments:

University of Michigan-Dearborn: Computer and Information Science Department, Professor and Chair, September, 2001-Present.

Wayne State University, Detroit, Michigan: Computer Science Department, Chair, May 1995 – December 2000; Professor, September 1987 – August 2001; Associate Professor, September 1976 – August 1987.

Georgia Institute of Technology, Atlanta, Georgia: Information and Computer Science Department, Assistant Professor, September 1971 – August 1976.

Five Selected Publications Most Relevant to the Proposed Project:

- [1] B. Alkhazi, T. Ruas, M. Kessentini, M. Wimmer, and **W.I. Grosky**, 'Automated Refactoring of ATL Model Transformations: A Search-Based Approach,' *Proceedings of the ACM/IEEE Nineteenth International Conference on Model Driven Engineering Languages and Systems (MODELS'16)*, Saint-Malo, France, October 2016, pp. 295-304.
- [2] H. Wang, A. Ouni, M. Kessentini, B. Maxim, and **W. Grosky**, 'Identification of Web Service Refactoring Opportunities as a Multi-Objective Problem,' *IEEE International Conference on Web Services (ICWS'16)*, San Francisco, California, USA, June-July 2016, pp. 586-593.
- [3] V.N. Gudivada, D. Rao, and **W.I. Grosky**, 'Data Quality Centric Application Framework for Big Data,' *Proceedings of the Second International Conference on Big Data, Small Data, Linked Data and Open Data (ALLDATA'16)*, Lisbon, Portugal, February 2016.
- [4] H. Wang, M. Kessentini, **W. Grosky**, and H. Meddeb, 'On the Use of Time-Series and Search-Based Software Engineering for Refactoring Recommendations,' *Proceedings of the Seventh International Conference on Management of Computational and Collective Intelligence in Digital Ecosystems (MEDES'15)*, Sao Paulo, Brazil, October 2015, pp. 62-70.
- [5] C. Jackson, R. Agrawal, J. Walker, and **W. Grosky**, 'Scenario-Based Design for a Cloud Forensics Portal,' *IEEE International Symposium on Technologies for Homeland Security*, Boston, Massachusetts, April 2015, pp. 1-6.

Five Other Recent Publications:

- [1] R. Agrawal, C. Wu, **W. Grosky**, and F. Fotouhi, 'Bayesian Framework for Automatic Image Annotation using Visual Keywords,' *Proceedings of the*

- 2010 International Conference on Ubiquitous Computing and Multimedia Applications* (Communications in Computer and Information Science, Volume 75 (2010), G.S. Tomar, **W.I. Grosky**, T.-H. Kim, S. Mohammed, and S.K. Saha (Eds.), Springer), Miyazaki, Japan, June 2010, pp. 142-157.
- [2] B. Hawashin, F. Fotouhi, T.M. Truta, and **W. Grosky**, 'Efficient Privacy Preserving Protocols for Similarity Join,' *Transactions on Data Privacy*, Volume 1 (2011), pp. 1-28.
 - [3] B. Hawashin, F. Fotouhi, and **W. Grosky**, 'Diffusion Maps: A Superior Semantic Method to Improve Similarity Join Performance,' *Proceedings of the 2010 IEEE International Conference on Data Mining Workshops (Fourth International Workshop on Mining Multiple Information Sources)*, Sydney, Australia, December 2010, pp. 9-16.
 - [4] L. Tan, F. Fotouhi, **W.I. Grosky**, H.F. Pop, and N. Mouaddib, 'Improving Similarity Join Algorithms Using Fuzzy Clustering Technique,' *Proceedings of the 2009 IEEE International Conference on Data Mining Workshops (Third International Workshop on Mining Multiple Information Sources)*, Miami Beach, Florida, December 2009, pp. 545-550.
 - [5] B. Medjahed, S. Hadi, and **W.I. Grosky**, 'A Service-Oriented Framework for Controlling Invasive Species in Agriculture,' *International Journal of Metadata, Semantics, and Ontologies, Special Issue on Agricultural Metadata and Semantics*, Volume 4, Issue 1/2 (2009), pp. 34-41.

Synergistic Activities:

Co-Author, *Human Centered e-Business*, Kluwer Academic Publishers, Boston, 2003 (With R. Khosla and E. Damiani).

Co-Editor, *Handbook of Multimedia Information Management*, Prentice-Hall PTR, Upper Saddle River, New Jersey, 1997 (With R. Jain and R. Mehrotra).

Editor-in-Chief, *IEEE Multimedia*, 1998-1999, 2000-2001; Associate Editor, 1993-1997, 2002-March 2014; Advisory Board, April 2014-Present.

Associate Editor, *International Journal of Multimedia Data Engineering and Management*, IGI-Global, 2010-Present; *Pattern Recognition*, Elsevier, 1994-2007.

Editorial Board Member, *International Journal of Knowledge-Based Organizations*, Area Editor, IGI Global, 2011-Present; *International Journal of Multimedia Technology*, Academic Publishers, 2011-Present; *ICST Transactions on Social Informatics*, 2010-Present; *International Journal of Information Technology, Communications, and Convergence*, Inderscience, 2010-Present; *Journal of Multimedia Processing and Technologies*, sigappfr.acm.org, 2010-Present; *Advances in Multimedia*, Hindawi Publishing, 2009-Present; *International Journal on Advances in Internet Technology*, IARIA, 2009-Present; *International Journal of Semantic Computing*, World Scientific, 2006-Present; *International Journal of Information and Communication Technology Education*, IGI Global, 2004-Present; *International Journal on Semantic Web and Information Systems*, IGI Global, 2004-Present; *Journal of Digital Information Management*, Digital Information Research Foundation, 2003-Present; *Multimedia Tools and Applications*, Springer, 2002-Present.

General Co-Chair of 4 international conferences in the last three years.

Member of over 120 conference program committees in the last three years.

Ph.D. Advisees:

Rajeev Agrawal, Imran Ahmad, FadouaAtaa-Allah, Kim Choe, Lionel Deimel, Renato Ermann, Charlie Jiang, Wenyi Li,Xin Li, AllaouaMaamir, Rajiv Mehrotra, Michael Morse, Mohammed Shafique, Linda Sirounian, D.V. Sreenath, JunpingSun, Yi Tao, Frank Tsui, Kenny Wang, Junying Xing, Hua Yan, Fudong Yin, Rong Zhao.

Recent Collaborators and Co-Editors:

DrissAboutajdine, Universite Mohammed V, Rabat, Morocco; Rajeev Agrawal, North Carolina A&T State University, Greensboro, North Carolina; Richard Chbeir, University of Pau, France; FarshadFotouhi, Wayne State University, Detroit, Michigan;MarouaneKessentini, University of Michigan-Dearborn, Dearborn, Michigan; Bruce Maxim, University of Michigan, Dearborn, Michigan;BrahimMedjahed, University of Michigan, Dearborn, Michigan; Jignesh Patel, University of Wisconsin, Madison, Wisconsin;Nilesh Patel, Oakland University, Rochester, Michigan;Peter Stanchev, Kettering University, Flint, Michigan.

Thesis Advisor:

Frederic Fitch, Yale University, New Haven, Connecticut (Deceased).

Proposal to Vel Tech University

Chennai, India

From William Grosky, Professor and Chair, Department of Computer and Information Science

Teaching at University of Michigan-Dearborn since 2001; including other institutions (Georgia Tech and Wayne State University), have taught since 1971.

Areas of expertise: Multimedia information systems, content-based retrieval, database management systems, information retrieval, natural language processing, data science, analytics

Title: Information Retrieval and Text Mining

I would like to offer a 40-hour short course in Introduction to Information Retrieval and Text Mining. The course will be offered 4 hours/day for 10 days, during July-August 2017. To incorporate a project into the course, the amount of time for this course should be 3 weeks, with the first and third week for the course lectures, and the middle week used by the students to concentrate on their project. Office hours of 2 hours/day for the first and third week and 4 hours/day for the middle week (giving a total of 40 office hours). The target audience consists of advanced undergraduate students or graduate students. The prerequisite is some facility in designing algorithms and implementing them in a high-level language. A course in databases is encouraged, but not necessary.

Course offered using slides and a blackboard. Will use my laptop for slide presentation and toolset presentations, but would like the various toolsets, which are open source, to be installed in a computer lab for the use of the students.

Course will have a project and 2 home works.

The course description is as follows:

This course covers techniques for locating relevant semi-structured documents (e.g. text, web pages) residing in a large repository and satisfying various information needs. Our approach will be practical and we will be using several toolkits, such as MeTA, R, NLTK, and Weka.

The course topics will be as follows:

1. Introduction and Motivation
2. Natural language processing and language models
3. Toolkits
4. Text data access
5. Retrieval models
6. Relevance feedback

7. Search engine implementation
8. Search engine evaluation
9. Web search
10. Recommender systems
11. Word association mining
12. Text clustering
13. Text categorization
14. Text summarization
15. Topic analysis
16. Opinion mining and sentiment analysis
17. Dimensional reduction techniques

Course objectives:

- An understanding of the various ways that semi-structured/unstructured entities can be represented and processed in an automated environment.
- An understanding of the differences between database management systems and information retrieval systems.
- An understanding of various approaches to machine learning.
- An understanding of how natural language processing can influence the approaches taken to implement a document retrieval system.
- An understanding of how Google implements Web search.
- An understanding of dimensional reduction techniques for document retrieval.

(Estd. u/s 3 of UGC Act, 1956)

Visiting Professor Programmes

Name of the Professor	Prof. William Grosky
University & Country	University of Michigan, Dearborn & USA
Title of the Course	Information Retrieval and Text Mining
Department	Computer Science and Engineering
Dates of the Course	24 July - 12th August 2017
Total No. of Hours	40 Week 1- 2hours/day Week 2- 4hours/day Week 3- 2hours/day
Course Contents	Attached

Coordinator - Office of Intl. Pgms

Director- Office of Intl.pgms

Dean 28/6/2017

Director (Academic)

Vice Chancellor

Dr. N. Malavizhi
Head of the Department,
Computer Science & Engineering
Veltech Dr.RR & Dr.SR University
(Est. w/s of UGC Act.1956)

Dr. Munirathnam Naidu .M
Dean School of Computing
Veltech Dr.RR & Dr.SR University
(Estd. w/o 3 of UGC Act, 1956)

(*) Resubmitted;
(Two) 2 credits under
the category, "Institute/
Higher Institute Learning
Interaction".
Mph
11/7/17

Veltech Dr.RR & Dr.SR University

Department of CSE

INTERNATIONAL PROGRAM JULY 24 - AUG 12

Stu_Id	Stu_Name	Reg Number	Total Hours	Attended Hours	%
ITU6406	CHIRAMANA SATHWIK KUMAR REDDY	15UECS0045	40	40	100
ITU6247	CHINNAMUTHUKU JAYAKRISHNA	15UECS0041	40	36	90
ITU6236	DANDA SHASHANKREDDY	15UECS0047	40	40	100
ITU6396	GUINDRA VISHNU VARDHAN REDDY	15UECS0067	40	40	100
ITU6284	SUMEET RAJA SWAIN	15UECS0212	40	36	90
ITU5984	SRIJIT CHAKRABARTY	15UECS0209	40	36	90
ITU5928	ESHWAR SWAROOP	15UECS0056	40	40	100
ITU6334	CHALLA SUSMITHA	15UECS0039	40	22	55
ITU6601	NAKKA LOKESWARA LAKSHMI SANTHOSH KUMAR	15UECS0128	40	26	65
ITU6378	KRISHNA PRASANNA RAAVI	15UECS0105	40	22	55
ITU6310	ABHIRAM REDDY	15UECS0003	40	36	90
ITU6273	MANGALI GEETHANJALI	15UECS0113	40	40	100
ITU5977	ANISH KUMAR SINGH	15UECS0012	40	40	100
ITU6563	CHINTA NAGA HARSHITHA	15UECS0042	40	40	100
ITU5871	KANDLAGUNTA VENKATA MAHESH REDDY	15UECS0092	40	38	95
ITU6206	BANDARU SAI KIRAN	15UECS0027	40	40	100
ITU6598	GUNNAMREDDY SAI GOWTHAM	15UECS0066	40	30	75
ITU5963	RAHUL VERMA	15UECS0166	40	4	10
ITU6522	NANDIGAM UDAYA NAGA V SATYA SIVA DILEEP	15UECS0131	40	32	80
ITU6013	SRI RAM SANNITH	15UECS0208	40	36	90
ITU6390	VISHAL VERMA	15UECS0237	40	36	90
ITU6616	ANUP KUMAR	15UECS0014	40	0	0
ITU6574	KAKI MANOJ REDDY	15UECS0084	40	40	100
ITU6179	MANNEPALLI DHANUSH KUMAR	15UECS0116	40	36	90
ITU6211	RAJ GUPTA .	15UECS0167	40	36	90
ITU6538	K. SUBHASH	15UECS0210	40	40	100
ITU6648	AKHIL SAI SATYANARAYANA REDDY	15UECS0010	40	40	100
ITU6175	MALLEMPUDI NAGENDRA BABU	15UECS0111	40	34	85
ITU6297	ANURAG CHAUHAN	15UECS0015	40	12	30
ITU6059	ANISH	15UECS0013	40	40	100
ITU6395	LEKKALA ANILKUMAR	15UECS0107	40	32	80
ITU6386	HEMANTH KUMAR GUPTA .	15UECS0072	40	36	90
ITU6491	UPPUTURI VENU	15UECS0226	40	36	90
ITU6549	PAVAN KUMAR REDDY	15UECS0148	40	36	90
ITU5899	G.ARAVINDH	15UECS0016	40	40	100
ITU6646	BHARATHA NESAN D	15UECS0029	40	40	100
ITU6469	LEBAKU PUJITHA	15UECS0106	40	40	100
ITU5990	DHURJATI SUCHARITHA	15UECS0051	40	22	55
ITU5951	VISHAL CHAUBEY	15UECS0235	40	36	90
ITU6284	Y.SAI CHANDRA KANTH	15UECS0212	40	40	100

SNo	Stu_Id	Stu_Name	Stu_Branch	Stu_Test_SubjectCod	Stu_Test_SubjectName	Subject_Pas	Stu_Grade
1	VTU5955	MALLEMPATI JOSHNA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	D
2	VTU6152	PARISA HEMANTH SAI KUMAR	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
3	VTU6155	PAMULAPATI HEMALATHA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
4	VTU6171	PREETHI.C	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
5	VTU6185	KASARAGADDA SRILAKSHMI	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
6	VtU6213	PADIGAPATI SWETHA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
7	VTU6219	SONAL SINGH	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
8	VTU6259	TUMMEPALLI KRISHNA SAI JAYA DEEP	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
9	VTU6261	SURE VENKATA NAGA PARVESH	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
10	VTU6262	TUMMEPALLI DHANUSH CHANDRA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
11	VTU5882	NAGHA SUHAASINI M	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
12	VTU5885	VELPULA SATISH REDDY	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
13	VTU5891	SHAIK FOUKHIYA FATHIMA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
14	VTU5932	SAMIMA SANOFER A	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
15	VTU6000	SUNKARI AMARNADH GUPTA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
16	VtU6519	SAURABH KUMAR PANDEY	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
17	VtU6544	POGIRI TARUN KUMAR	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
18	VtU6550	VEGINETI KRISHNA CHAITANYA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
19	VTU6553	P JAGADISH	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
20	VtU6580	ABHISHEK RAJA PERIKALA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
21	VtU6600	POLAPALLI RANJITH REDDY	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
22	VtU6628	JANAPAREDDY RUPENDRA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
23	VtU6674	BYLAPUDI JAGAN MUKHESH	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
24	VtU6678	GARIKINA CHANDRA KIRAN	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
25	VtU6720	PRAHARAJU VENKATASAIMANOJ	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
26	VTU6006	GADI RAJU DEEPIKA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	D
27	VTU6014	DEVARAPALLI LAKSHMI TEJASWI	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
28	VTU6027	TUHINA PAIK	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
29	VTU6029	NAVEENARATHI G.K.	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
30	VTU6046	JAKKAPU JYOSTNAVYA	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B
31	VTU6049	SHYAM S CHOUDHARY	CSE	1157CS901	Information Retrieval and Text Mining	Pass	A
32	VTU6055	PERLA ROJA LAKSHMI	CSE	1157CS901	Information Retrieval and Text Mining	Pass	B

University of Michigan, Dearborn, USA

of the Research te/University/ ganization	Country	Duration of the Agreement	Academic Year	Date of Signing	Date of Expiry	Purpose/Activities
y of Michigan -	USA	5 Years	2017-18	21.05.2018	20.05.2023	Student Exchange in UG Courses (3+1 and 3+2 Programmes), Guest Programs & Master Progression Programmes

A
B
D
A
B
A
D

Actual Activities with University of Michigan, Dearborn, USA	
A.Y. 2017-18	Faculty Mobility (Incoming - Short Courses) - 2
A.Y. 2019-20	Faculty Mobility (Incoming - Short Courses) - 3



Dean - International Relations

Dr. P. Suresh
Dean - International Relations

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Veltech Dr.RR & Dr.SR University

(Estd. u/s 3 of UGC Act, 1956)

S.Sivaperumal

Director International Relations

Date: 28 JUL 2017

Our Ref. No: 2017/VF12

Your Ref. No: DINT 2017 / 188

Submitted for the Approval:

Name of the Professor: Prof. Dr. William Grosky

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: Information Retrieval and Text Mining

Department: Computer Science and Engineering

Students: III year, 40 Students

Training Program date: 17th July to 4th August, 2017

Sl. No	Description	Amount in INR	Amount in USD
1	Course Honorarium (Rs.3000 * 40Hrs) (Net Amount & Tax Free)	1,20,000	1870.47
2	Flight booking Charges (Reimbursement) (1288.7 USD as on 21-Mar-2017)	84, 135	1288.7
	Total	2,04,135	3159.17

(Rupees Two lakh four thousand one hundred and thirty five only)

In this regard, I request your approval for transferring the amount to the Following Account,

Name: William Grosky

Bank name: JP Morgan Chase

Account No: 787030279

SWIFT Code: CHASUS33

Routing number (similar to IBAN): 072000326

Thank You,

S. Sivaperumal

S. Sivaperumal

Director International Relations

Veltech Dr.RR & Dr.SR University

(Estd. u/s 3 of UGC Act, 1956)



400 feet Outer Ring Road, Avadi,
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Email : dint@veltechuniv.edu.in

Website : www.veltechuniv.edu.in



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Computing
Department of Computer Science and Engineering

Specialized one credit course on
“Artificial Neural Networks”
(1157CS945)

by
Prof. Dr. M.Shridhar
University of Michigan, Dearborn, USA



Held on
Date: August 19 to 27, 2019

THE UNIVERSITY OF MICHIGAN-DEARBORN
Department of Electrical & Computer Engineering

1. Name: Malayappan Shridhar

2. Academic Rank: Professor (FT)

3. Degrees, with fields, institutions and dates:

Ph.D. 1969 University of Aston in Birmingham, U. K.
Electrical Engineering
M.S. 1967 Polytechnic Inst. of New York
Electrical Engineering
D.MIT. 1962 Madras Institute of Technology
Instrumentation and Control,
B.Sc. 1959 University of Bombay
Mathematics

4. Number of years in service on this faculty: 25 years

2007 – Present Professor, ECE and Associate Provost, Academic Affairs
1985 – 2007 Professor and Chair, Electrical and Computer Engineering

5. Other related experience-teaching, administrative, industrial, etc.:

1969 -1985 Faculty Member, Dept. of Electrical Eng., University of Windsor,
Canada
1963 -1966 Scientific Officer, Bhabha Atomic Research Center, Bombay, India.

6. Consulting:

Diffraction Ltd., Canada,	General Motors Corporation, USA
CGA-Alcatel, France,	Ford Motor Co, USA,
TRW Inc.	CSC, Oakland, CA
Lear Corp, MI	Kappa Imaging LLC, Oakland, CA

7. State in which registered: Professional Engineer, Province of Ontario.

8. Principal publications of last five years:

- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012
- M. Shridhar, G.F. Houle, Ron Bakker, F. Kimura, “Comprehensive Check Image Reader,” Advances in Digital Document Processing and Retrieval, Statistical Science and Interdisciplinary Research – Vol. 13, 2014, pp. 123-156, 2014
- John W. V. Miller, M. Shridhar, “Illumination-Invariant Image Processing,” Machine Vision Handbook, Springer-Verlag, Vol.1, pp. 543-564, 2012
- M. Shridhar and P. Watta, Chapter: “Pattern Recognition,” Machine Vision Handbook, Springer-Verlag, Vol. 2, Ch. 24, pp 1079-1102, 2012
- John W. V. Miller, M. Shridhar, T. Peatee, “Restoration of Missing Boundary Segments in Shattered Glass,” Machine Vision Handbook, Springer-Verlag, Vol. 2, pp. 1231-1242, 2012
- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012

9. Scientific and professional societies of which a member:

Senior Life Member, IEEE.

10. Honors and awards:

- Distinguished Faculty 1988, Michigan Association of Governing Boards
- Distinguished Research Award, University of Michigan - Dearborn 1994
- Houle, G., Aragon, D., Smith, R., Shridhar, M., Kimura, F. "A Multi-Layer Corroboration-Based Check Reader," Proc. of IAPR Workshop on Document Analysis Systems, Oct. 14 - 16, 96, Malvern, PA. (BEST PAPER AWARD)

11. Institutional and professional service in the last five years:

- Associate Provost, Academic Affairs 2007-2013
- PEV-ABET
- Peer Reviewer, Higher Learning Commission
- Mentor, HLC Assessment Academy

12. Percentage of time available for research and Scholarly activities

15% of time available for research and scholarly activities.

13.

Term/Year	Percentage of time committed to the program
Fall 2015	37.50%
Winter 2016	75%

Artificial Neural Networks

Students will gain an understanding of the language, formalism, and methods of artificial neural networks. The student will learn how to mathematically pose the machine learning problems of function approximation/supervised learning, associative memory and self-organization, and analytically derive some well-known learning rules, including backprop. The need to incorporate hidden layers in design of neural networks will be discussed with examples. A brief introduction to **Deep Learning** will be given towards the end of the course.

Note: Case studies involving Shridhar's research will be presented.

CSE-PR-908
17/06/2019
DA/11573
17/06/2019.



Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. as 3 of UGC Act, 1956)

Directorate of International Relations

Visiting Professor Programmes

Details of Professor & Course:

Name of the Professor	Prof. Dr. M. Shridhar (CV Attached)
University & Country	University of Michigan, Dearborn, USA
Title of the Course	Artificial Neural Networks
Department	Computer Science and Engineering
Dates of the Course	August 19 to 27, 2019
Total No. of Hours	15
No. of Credits	1
Category	Industry/ Higher Institute Learning
Course Content	Attached

Prepared by:

[Signature]

Coordinator – Directorate of Intl. Relations

Forwarded by:

[Signature] 17/06/19.

Director – Directorate of Intl. Relations

[Signature]
HoD

[Signature]
Dean

[Signature]
Prof. Dr. techn. Koteswara Rao Arani
Director (Academic)

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. as 3 of UGC Act, 1956)

[Signature] 20/6
Vice Chancellor

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
1	VtU6981	TADIKAMALLA PAVAN DILEEP	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
2	VtU6998	SUNKARA SATYANARAYANA	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	D
3	VtU7888	JANESH G	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
4	VtU7152	DEVATHA SATWIK KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
5	VtU7201	THADAPANENI AJAY KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	D
6	VtU7965	YAGATEELA SUMANTH	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	D
7	VtU8309	AKANGTEMSU	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	D
8	VtU7160	VISHAL DEEP M	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
9	VtU7173	MEDISETTY YOGA NAGA ESWAR	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	D
10	VtU7398	GANTLA HARISH	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	A
11	VtU7741	SYED KHAJA BADRUDEEN K	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
12	VtU7804	MATHI JAGADEESH	B.Tech	CSE	1157CS945	Artificial Neural Network	Pass	C
13	VtU6917	NEELAKANTAM JAHNAVI	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	Pass	B
14	VtU6923	BETHI BHARATHA SIMHA REDDY	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	Pass	C
15	VtU8302	PONUGOTI RITHVIK KUMAR	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	Pass	C
16	VtU6971	PEMMASANI PRUDHVI NADH	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	Pass	B
17	VtU7082	THAKUR SHUBAMSINGH DHIRENDRA	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	Pass	B
18	VtU8216	NOONELA VENKATAKRISHNA RAVIKUMAR	B.Tech	CSE(DA)	1157CS945	Artificial Neural Network	NE	NE
19	VtU6986	CHANDANA NITESH SIVA MARUTHI	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Network	Pass	C
20	VtU7010	CHERUKUMALLI SEETHA RAMAIAH	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Network	Pass	B
21	VtU7293	PRISVIN DAVID.S	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Network	Pass	C
22	VtU7916	MANAM ARAVIND	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Network	Pass	C
23	VtU8094	BUCHUPALLI JOSEPH PAVAN REDDY	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Network	Pass	C
24	VtU10255	PRASHANT KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
25	VtU9553	CHINTHALA REVANTH	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
26	VtU9179	MANIKONDA VENKATA KALYAN BABU	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
27	VtU9204	KANCHAMREDDY MAHESHWAR REDDY	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
28	VtU10258	NACHIKETA KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
29	VtU9562	KADIRI SRINIVASA ROHITH	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
30	VtU9642	KAMMA MAHESH BABU	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
31	VtU9824	KAKUMANU VENKATA LAKSHMI NARASIMHARAO	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
32	VtU9891	NELLORE SREERAM CHARAN	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
33	VtU10466	PALAGIRI YASWANTH SAI	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
34	VtU6949	PASULA VINAY KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
35	VtU6966	AVULA CHANDRA SEKHAR REDDY	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
36	VtU6987	KASARAGADDA SAI MANI TEJA	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
37	VtU6992	KASARAGADDA VINOD	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
38	VtU7164	NARALA BRAHMANANDAREDDY	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
39	VtU7200	KONA NAGA SAI TEJA	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
40	VtU7824	CHENNUPATI RAGHAVENDRA	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE

41	VtU7872	M.YESHWANTH	B.Tech	CSE	1157CS945	Artificial Neural Networks	NE	NE
42	VtU8107	BADRI PARTHASARATHY	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
43	VtU8178	NULAKA DILEEP REDDY	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
44	VtU8196	BASUTHKAR KISHORE KUMAR RAO	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	S
45	VtU8274	ABHINAV RAMDAS PATIL	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
46	VtU8672	BOJANAPATI VENKATAVISWAKASI LOHITH RAHUL	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	B
47	VtU8806	B MANEESH KUMAR	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
48	VtU8913	PENUBOTHU HARI HARA MANIKANTA	B.Tech	CSE	1157CS945	Artificial Neural Networks	Pass	A
49	VtU8216	NOONELA VENKATAKRISHNA RAVIKUMAR	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
50	VtU9626	RAMIREDDY SAINATHA REDDY	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
51	VtU6974	CHITIKIREDDI BHARGAVI	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
52	VtU7073	SAVARAM NAGA VARDHANI	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
53	VtU7268	DADI PUJITHA SAMEERA	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
54	VtU8376	JANAPARAPU THIRUMALA VENKATA SAI	B.Tech	CSE(DA)	1157CS945	Artificial Neural Networks	Pass	A
55	VtU10139	KOMMIDI DHEERAJ REDDY	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	A
56	VtU9319	NAAGA NARASIMHA.M	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	B
57	VtU10261	ABHISHEK RAJ	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	A
58	VtU9963	SAIKUMAR TIRUPATHI TATI	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	C
59	VtU10725	RUDRESH KARN	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	S
60	VtU8453	ABHINAV KUMAR SANYASI	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	A
61	VtU8816	ATYAM DILEEP	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	B
62	VtU9252	KATTAMEEDI VENKATA SUBBA REDDY	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	B
63	VtU9225	GALLA CHAITANYA	B.Tech	CSE(NW&CS)	1157CS945	Artificial Neural Networks	Pass	A

DINT109-19/025

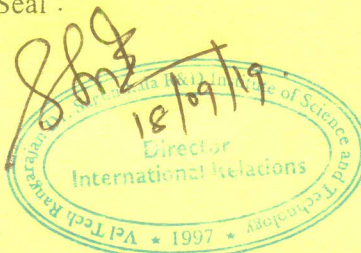


Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act. 1956)

Form.No. 12.1B **2962**

AUTHORISATION FOR ONLINE PAYMENT 25001 TO 1 LAKH

Date 1 7 0 9 2 0 1 9		P.O.No./Bill No./Letter Ref. No.	
From Dept/Division:- DINT		P.O./Bill/Letter date : 1 7 0 9 2 0 1 9	
Nature of Expenses G.Code:-		Payee Name : <u>Prof. Malayappan Shridhar</u>	
Description:- <u>Prof. Shridhar short</u>		PAN NO: <u>BMGS5560A</u>	
<u>Course Honorarium (30 Hrs) - CSEA 17</u>		A/C No. <u>0141 1010 0022 12</u>	
Date of Event/Activities:-		Bank <u>HDFC Bank</u>	
		Branch <u>R.A. Puram</u>	
Expected Date of Bill Closer:-		IFSC Code <u>HDFC 0000141</u>	
		Amount Payable Rs. <u>84,032/-</u>	
Faculty/Staff Responsible:- <u>T. Ramesh Kumar</u>		(in words) <u>Eighty Four Thousand and</u>	
Mobile No. <u>87544 84372</u>		<u>thirty two only.</u>	
Form Received Date :			
Payment Processed by		Payment Recommended by	
Name : <u>CASHOK KUMAR</u>		Sign & Seal :	
Signature : <u>Cashok</u>		Payment Authorized by	
Form No. 12.1B		Sign & Seal :	
Entered in Budget Register			
pg. 08, sl. 13			
<u>Cashok</u> 12/9/19.			



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s of UGC Act, 1956)

Our Ref. No: 2019-2020/VF 167 & 168

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: 1. Pattern Recognition (15 Hrs)
2. Artificial Neural Networks (15Hrs)

Department: Computer Science and Engineering & Information Technology

Students : 1. 35 (2018-2022 & 2017-2021)
2. 27 (2016-2020 & 2017-2021)

Program date: 1. August 5 to 13, 2019
2. August 19 to 28, 2019

Sl. No	Description	Amount in INR
1	Course Honorarium (Rs.3000 * 30Hrs) (Net Amount & Tax Free)	90,000 ✓
2	Deductions for local flight bookings to Bangalore and return INR (4088+ 1880)	5, 968 ✓
	Total	84,032 ✓

(Rupees Eighty four thousand and thirty two only)

In this regard, I request your approval for transferring the amount to the following Account,

Name: Malayappan Shridhar

Bank name: HDFC Bank

Branch: R.A Puram

Account No: 01411010002212

IFSC Code: HDFC 0000141

PAN No: BMGS5560Q

Thank You,

S.Sivaperumal



(Copy of the same attached)



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Computing
Department of Computer Science and Engineering

Specialized One Credit course on
“Pattern Recognition”
(1157CS946)

by
Prof. Dr. M.Shridhar
University of Michigan, Dearborn, USA



Held on
Date: August 5 to 13, 2019

THE UNIVERSITY OF MICHIGAN-DEARBORN
Department of Electrical & Computer Engineering

1. Name: Malayappan Shridhar

2. Academic Rank: Professor (FT)

3. Degrees, with fields, institutions and dates:

Ph.D. 1969 University of Aston in Birmingham, U. K.
Electrical Engineering
M.S. 1967 Polytechnic Inst. of New York
Electrical Engineering
D.MIT. 1962 Madras Institute of Technology
Instrumentation and Control,
B.Sc. 1959 University of Bombay
Mathematics

4. Number of years in service on this faculty: 25 years

2007 – Present Professor, ECE and Associate Provost, Academic Affairs
1985 – 2007 Professor and Chair, Electrical and Computer Engineering

5. Other related experience-teaching, administrative, industrial, etc.:

1969 -1985 Faculty Member, Dept. of Electrical Eng., University of Windsor,
Canada
1963 -1966 Scientific Officer, Bhabha Atomic Research Center, Bombay, India.

6. Consulting:

Diffrauto Ltd., Canada,	General Motors Corporation, USA
CGA-Alcatel, France,	Ford Motor Co, USA,
TRW Inc.	CSC, Oakland, CA
Lear Corp, MI	Kappa Imaging LLC, Oakland, CA

7. State in which registered: Professional Engineer, Province of Ontario.

8. Principal publications of last five years:

- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012
- M. Shridhar, G.F. Houle, Ron Bakker, F. Kimura, “Comprehensive Check Image Reader,” Advances in Digital Document Processing and Retrieval, Statistical Science and Interdisciplinary Research – Vol. 13, 2014, pp. 123-156, 2014
- John W. V. Miller, M. Shridhar, “Illumination-Invariant Image Processing,” Machine Vision Handbook, Springer-Verlag, Vol.1, pp. 543-564, 2012
- M. Shridhar and P. Watta, Chapter: “Pattern Recognition,” Machine Vision Handbook, Springer-Verlag, Vol. 2, Ch. 24, pp 1079-1102, 2012
- John W. V. Miller, M. Shridhar, T. Peatee, “Restoration of Missing Boundary Segments in Shattered Glass,” Machine Vision Handbook, Springer-Verlag, Vol. 2, pp. 1231-1242, 2012
- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012

9. Scientific and professional societies of which a member:

Senior Life Member, IEEE.

10. Honors and awards:

- Distinguished Faculty 1988, Michigan Association of Governing Boards
- Distinguished Research Award, University of Michigan - Dearborn 1994
- Houle, G., Aragon, D., Smith, R., Shridhar, M., Kimura, F. "A Multi-Layer Corroboration-Based Check Reader," Proc. of IAPR Workshop on Document Analysis Systems, Oct. 14 - 16, 96, Malvern, PA. (BEST PAPER AWARD)

11. Institutional and professional service in the last five years:

- Associate Provost, Academic Affairs 2007-2013
- PEV-ABET
- Peer Reviewer, Higher Learning Commission
- Mentor, HLC Assessment Academy

12. Percentage of time available for research and Scholarly activities

15% of time available for research and scholarly activities.

13.

Term/Year	Percentage of time committed to the program
Fall 2015	37.50%
Winter 2016	75%

Pattern Recognition

Introduction to pattern recognition (PR) as a process of data analysis. Representation of features in multidimensional space as random vectors. Similarity and dissimilarity measures in feature space. Bayesian decision theory, discriminant functions and supervised learning. Clustering analysis and unsupervised learning. Estimation and learning. Feature extraction and selection. Introduction to interactive techniques in PR. Applications of PR.

Incorporating multiple PR strategies to improve accuracy of pattern recognition will be discussed with case studies from Shridhar's research.

CSE-PR-907
17/06/2019
DA/115721
17/06/2019



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Est. under UGC Act, 1956)

Directorate of International Relations
Visiting Professor Programmes

Details of Professor & Course:

Name of the Professor	Prof. Dr. M. Shridhar (CV Attached)
University & Country	University of Michigan, Dearborn, USA
Title of the Course	Pattern Recognition
Department	Computer Science and Engineering
Dates of the Course	August 5 to 13, 2019
Total No. of Hours	15
No. of Credits	1
Category	Industry/ Higher Institute Learning
Course Content	Attached

Prepared by: 

Coordinator – Directorate of Intl. Relations

Forwarded by: 

Director – Directorate of Intl. Relations


HoD


Dean


Director (Academic)


Vice Chancellor

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Est. under UGC Act, 1956)



SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
1	VTU10999	VIPPADAPU AKHIL	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
2	VtU11137	KSHATRI PAVAN NANDAN SINGH	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
3	VtU11185	SAMAKUNTA REVANTH KUMAR REDDY	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
4	VtU11440	KRISHNA VIJAY SINGH	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
5	VtU11454	AYUSHI	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
6	VtU11673	PRAGATI JHA	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
7	VtU11786	JIYAUL HAQUE	B.Tech	CSE	1157CS946	Pattern Recognition	NE	NE
8	VtU12195	KOTA ESWAR NARASIMHA PRASAD	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
9	VtU12221	KSHATRI VAYU NANDAN SINGH	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
10	VtU12357	AJIL K S	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
11	VtU13147	AMAN GOYANKA	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
12	VtU13238	DIVVALA SANDEEP	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
13	VtU13251	KORADA KOTESHWAR RAO	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
14	VtU13338	SHAIK SHAMEER	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
15	VtU13531	ANKIT DIXIT	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
16	VtU14203	KOMMANA SUSHMA SRI	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
17	VtU14635	V LAKSHMI PRAHARSHA	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
18	VtU14653	NAGUMOTHU DUSHYANTH	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
19	VtU14686	KONDAPATURU SWATHI SRI	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
20	VtU14692	VALLURI TEJASWI	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
21	VtU14699	MANDADI ADARSH	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
22	VtU14700	BOPPANA SAI KIRAN	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
23	VtU14715	DHULIPALLA KRISHNA VAMSI	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
24	VtU14716	BELLAM TARUN KUMAR	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
25	VtU14726	DENDUKURI SAI PANKAJ VARMA	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
26	VtU14743	RAVELLA VISHNU	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A

27	VtU14832	NADIPI RANA PRATHAP	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	B
28	VtU14933	THOTTEMPUDI LAKSHMAN	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
29	VtU14997	MAMIDI JACINTH BLESSY	B.Tech	CSE	1157CS946	Pattern Recognition	Pass	A
30	VtU6966	AVULA CHANDRA SEKHAR REDDY	B.Tech	CSE	1157CS946	Pattern Recognition	NE	NE
31	VtU7164	NARALA BRAHMANANDAREDDY	B.Tech	CSE	1157CS946	Pattern Recognition	NE	NE
32	VtU7211	BANDARU YOGI RAMU	B.Tech	CSE	1157CS946	Pattern Recognition	NE	NE

DINT109-19/025



Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act. 1956)

Form.No. 12.1B **2962**

AUTHORISATION FOR ONLINE PAYMENT 25001 TO 1 LAKH

Date

From Dept/Division:- DINT

Nature of Expenses G.Code:-

Description:- Prof. Shridhar short

Course Honorarium (30 Hrs) - CSEA 17

Date of Event/Activities:-

Expected Date of Bill Closer:-

Faculty/Staff Responsible:- T. Ramesh Kumar

Mobile No. 8754484372

Form Received Date :

Payment Processed by

Name : CASHOKKUMAR

Signature : Cashokumar

Form No. 12.1B

Entered in Budget Register

pg. 08, sl. 13

Cashokumar
12/11/19.

P.O.No./Bill No./Letter Ref. No.

P.O./Bill/Letter date :

Payee Name : Prof. Malayappan Shridhar

PAN NO: BMGS5560A

A/C No. 0141 1010 0022 12

Bank : HDFC Bank

Branch : R.A. Puram

IFSC Code : HDFC 0000141

Amount Payable Rs. 84,032/-

(in words) Eighty Four Thousand and

thirty two only.

Payment Recommended by
Sign & Seal :



Payment Authorized by
Sign & Seal :

[Signature]



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s of UGC Act, 1956)

Our Ref. No: 2019-2020/VF 167 & 168

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: 1. Pattern Recognition (15 Hrs)
2. Artificial Neural Networks (15Hrs)

Department: Computer Science and Engineering & Information Technology

Students : 1. 35 (2018-2022 & 2017-2021)
2. 27 (2016-2020 & 2017-2021)

Program date: 1. August 5 to 13, 2019
2. August 19 to 28, 2019

Sl. No	Description	Amount in INR
1	Course Honorarium (Rs.3000 * 30Hrs) (Net Amount & Tax Free)	90,000 ✓
2	Deductions for local flight bookings to Bangalore and return INR (4088+ 1880)	5, 968 ✓
	Total	84,032 ✓

(Rupees Eighty four thousand and thirty two only)

In this regard, I request your approval for transferring the amount to the following Account,

Name: Malayappan Shridhar

Bank name: HDFC Bank

Branch: R.A Puram

Account No: 01411010002212

IFSC Code: HDFC 0000141

PAN No: BMGS5560Q

Thank You,

S.Sivaperumal



(Copy of the same attached)



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Computing
Department of Computer Science and Engineering

Specialized course on
“Pattern Recognition”
(1152CS182)

by
Prof. Dr. M. Shridhar
University of Michigan, Dearborn, USA



Held on
Date: January to April, 2020

THE UNIVERSITY OF MICHIGAN-DEARBORN
Department of Electrical & Computer Engineering

1. Name: Malayappan Shridhar

2. Academic Rank: Professor (FT)

3. Degrees, with fields, institutions and dates:

Ph.D. 1969 University of Aston in Birmingham, U. K.
Electrical Engineering
M.S. 1967 Polytechnic Inst. of New York
Electrical Engineering
D.MIT. 1962 Madras Institute of Technology
Instrumentation and Control,
B.Sc. 1959 University of Bombay
Mathematics

4. Number of years in service on this faculty: 25 years

2007 – Present Professor, ECE and Associate Provost, Academic Affairs
1985 – 2007 Professor and Chair, Electrical and Computer Engineering

5. Other related experience-teaching, administrative, industrial, etc.:

1969 -1985 Faculty Member, Dept. of Electrical Eng., University of Windsor,
Canada
1963 -1966 Scientific Officer, Bhabha Atomic Research Center, Bombay, India.

6. Consulting:

Diffraction Ltd., Canada,	General Motors Corporation, USA
CGA-Alcatel, France,	Ford Motor Co, USA,
TRW Inc.	CSC, Oakland, CA
Lear Corp, MI	Kappa Imaging LLC, Oakland, CA

7. State in which registered: Professional Engineer, Province of Ontario.

8. Principal publications of last five years:

- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012
- M. Shridhar, G.F. Houle, Ron Bakker, F. Kimura, “Comprehensive Check Image Reader,” Advances in Digital Document Processing and Retrieval, Statistical Science and Interdisciplinary Research – Vol. 13, 2014, pp. 123-156, 2014
- John W. V. Miller, M. Shridhar, “Illumination-Invariant Image Processing,” Machine Vision Handbook, Springer-Verlag, Vol.1, pp. 543-564, 2012
- M. Shridhar and P. Watta, Chapter: “Pattern Recognition,” Machine Vision Handbook, Springer-Verlag, Vol. 2, Ch. 24, pp 1079-1102, 2012
- John W. V. Miller, M. Shridhar, T. Peatee, “Restoration of Missing Boundary Segments in Shattered Glass,” Machine Vision Handbook, Springer-Verlag, Vol. 2, pp. 1231-1242, 2012
- Offline Recognition of Handwritten Bangla Characters - An Efficient Two-stage Approach – Accepted for publication in Pattern Analysis and Applications – May 19, 2012

9. Scientific and professional societies of which a member:

Senior Life Member, IEEE.

10. Honors and awards:

- Distinguished Faculty 1988, Michigan Association of Governing Boards
- Distinguished Research Award, University of Michigan - Dearborn 1994
- Houle, G., Aragon, D., Smith, R., Shridhar, M., Kimura, F. "A Multi-Layer Corroboration-Based Check Reader," Proc. of IAPR Workshop on Document Analysis Systems, Oct. 14 - 16, 96, Malvern, PA. (BEST PAPER AWARD)

11. Institutional and professional service in the last five years:

- Associate Provost, Academic Affairs 2007-2013
- PEV-ABET
- Peer Reviewer, Higher Learning Commission
- Mentor, HLC Assessment Academy

12. Percentage of time available for research and Scholarly activities

15% of time available for research and scholarly activities.

13.

Term/Year	Percentage of time committed to the program
Fall 2015	37.50%
Winter 2016	75%

Title: Pattern Recognition

Introduction to pattern recognition (PR) as a process of data analysis. Practical applications, Representation of features in multidimensional space as random vectors, Feature extraction using image processing, Similarity and dissimilarity measures in feature space, Bayesian decision theory, Discriminant functions and supervised learning, Clustering analysis and unsupervised learning, Feature extraction and selection, Pattern Recognition using Neural Networks., Case studies from Shridhar's research projects.

Note: Pattern Recognition applications often involve extensive image processing. I will discuss specific techniques in my lectures.

Lecture Schedule: 3 lecture hours per week and one two hour MATLAB session per week

Prerequisites: Probability and Statistics, Linear Algebra, Programming in C++, Python or MATLAB

Grading: A group project involving two students on a PR problem (30%), one mid-term exam (30%) and one final exam (40%).

Note: This course is both analytical and practical. Only students possessing prerequisite skills and a level of maturity should enroll in this course. I would like one or two faculty members to act as guides on this course. I will use that opportunity to get selected faculty involved in research and scholarship.



Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Directorate of International Relations

Visiting Professor Programmes

Details of Professor & Course:

Name of the Professor	Prof. Dr. M. Shridhar, Professor Emeritus, Electrical and Computer Engineering, College of Engineering and Computer Science (CV attached)
University & Country	University of Michigan, Dearborn, USA.
Title of the Course	Pattern Recognition (Attached the course Contents)
Department	Computer Science and Engineering
Dates of the Course	January 20, 2020 to mid of April, 2020 (~ 3 months)
Total No. of Hours	45
No. of Credits	3
Category	Programme Elective ✓
Designation at Vel Tech	Visiting Faculty (at Professor Level)
Responsibilities	Teaching of one course work to UG Students and Research guidance to faculty members on AI & machine Learning
Terms	1. Honorarium: INR 1,20,000 per month including all applicable taxes 2. Accommodation at Vel Tech Guest house 3. Booking/ Reimbursement of shortest route economy flight fare

Prepared by: *[Signature]*

Coordinator – Directorate of Intl. Relations

Forwarded by: *[Signature]*

Director – Directorate of Intl. Relations

[Signature]
HoD **Dr. V. Srinivasan**
Head of the Department
Computer Science and Engineering

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

[Signature]
Director (Academic)

Prof. Dr. techn. Koteswara Rao Anne
Director Academics

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

[Signature]
Vice Chancellor

Prof. V. S. S. Kumar
Vice Chancellor

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
1	VtU7013	GUNTAMUKKALA GUNASEKHAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
2	VtU8472	DHINESH PRABHU P	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
3	VtU7204	RAMEEZ HAMEED J	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
4	VtU7141	AKASH DEEP	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
5	VtU7143	HARIKARAN A	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
6	VtU7160	VISHAL DEEP M	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
7	VtU9859	JADALA NAGENDRA BABU	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
8	VtU8975	TUNGALA RAVI VARMA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
9	VtU7130	GAURANG JAIN	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
10	VtU14298	MINNAKANTI VINAY BABU	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
11	VtU10294	SOURAV KUMAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
12	VtU9320	KOLLOJU SAI PAVAN MANIDEEP	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
13	VtU9393	KUMAR MANIDEEP CHERUKURI	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
14	VtU10103	SATISH KORLEPARA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
15	VtU10123	BHADINENI NARENDRA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
16	VtU11156	BIMAL KUMAR SINGH	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
17	VtU11392	SHASANKAR BORUAH	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
18	VtU11407	PIYUSH PANDIT	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
19	VtU11411	BOLLAM CHANDRANIL	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
20	VtU11681	NIKHIL KUMAR MANHAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	A
21	VtU11685	SYED SHAHIDUL AKHTAR HUSSAIN	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
22	VtU11710	PAUL KHAI LUN HAO LHUNGDIM	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
23	VtU14317	SAMEER ANAND	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
24	VtU14318	ADITYA RAJ	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	A
25	VtU14319	MANOHAR KUMAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
26	VtU14368	NITIN KISHORE	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
27	VtU14426	SASHANKA BASAK	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
28	VtU14433	AKSHAT KUMAR AGRAWAL	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
29	VtU14546	DAGGUBATI PRAVEEN KUMAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	A
30	VtU14587	PARUSHA MRUNAL	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
31	VtU14650	KOKKERAGADDA SRI RAM	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	A
32	VtU14917	KOVVURI SATYA LAHARI	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
33	VtU8682	BOBBILLA SAINATH	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
34	VtU12160	KANNEGANTI MADHURI	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
35	VtU12287	NARU RAMESH REDDY	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
36	VtU12334	SREERAMASETTY SHYAM KRISHNA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
37	VtU12431	M DEEPIKA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
38	VtU12742	KONGARUTU BHAVANA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
39	VtU12858	TALLURI DILEEP KUMAR	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
40	VtU12957	DONTAMSETTI CHIDANAND	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
41	VtU12971	NALLURI HARSHA DATTA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	C
42	VtU10639	RAM BABU KUMAR RAI	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	A
43	VtU13243	BANTUPALLI TARUN	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D
44	VtU13620	OYEBANJI FIYINFOLUWA OLUSEYI	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	B
45	VtU8808	MAJETI LAKSHMI NARAYANA	B.Tech	CSE	1152CS182	Pattern Recognition	Pass	D

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
46	VtU14241	ANDE VEERA VENKATA RAMANA	B.Tech	CSE(DA)	1152CS182	Pattern Recognition	Pass	C
47	VtU12439	PUTTA DEEPAK SAI	B.Tech	CSE(DA)	1152CS182	Pattern Recognition	Pass	B
48	VtU6888	DAKKA BASTEEN BENNY	B.Tech	CSE(NW&CS)	1152CS182	Pattern Recognition	Pass	D
49	VtU10377	SAI DIWAKAR SARAGADAM	B.Tech	CSE(NW&CS)	1152CS182	Pattern Recognition	Pass	B
50	VtU10725	RUDRESH KARN	B.Tech	CSE(NW&CS)	1152CS182	Pattern Recognition	Pass	S

DINT109-19/025



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Form.No. 12.1B **2962**

AUTHORISATION FOR ONLINE PAYMENT 25001 TO 1 LAKH

Date

From Dept/Division:- DINT

Nature of Expenses G.Code:-

Description:- Prof. Shridhar short

Course Honorarium (30 Hrs) - CSEA 17

Date of Event/Activities:-

Expected Date of Bill Closer:-

Faculty/Staff Responsible:- T. Ramesh Kumar

Mobile No. 8754484372

Form Received Date :

Payment Processed by

Name : CASHOKKUMAR

Signature : Cashokumar

Form No. 12.1B

Entered in Budget Register

pg. 08, sl. 13

Cashokumar
12/11/19.

P.O.No./Bill No./Letter Ref. No.

P.O./Bill/Letter date :

Payee Name : Prof. Malayappan Shridhar

PAN NO: BMGS5560A

A/C No. 0141 1010 0022 12

Bank HDFC Bank

Branch R.A. Puram

IFSC Code HDFC 0000141

Amount Payable Rs. 84,032/-

(in words) Eighty Four Thousand and

thirty two only.

Payment Recommended by
Sign & Seal :



Payment Authorized by
Sign & Seal :

[Signature]



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s of UGC Act, 1956)

Our Ref. No: 2019-2020/VF 167 & 168

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. M. Shridhar

University & Country: University of Michigan, Dearborn (UMD), USA.

Course Title: 1. Pattern Recognition (15 Hrs)
2. Artificial Neural Networks (15Hrs)

Department: Computer Science and Engineering & Information Technology

Students : 1. 35 (2018-2022 & 2017-2021)
2. 27 (2016-2020 & 2017-2021)

Program date: 1. August 5 to 13, 2019
2. August 19 to 28, 2019

Sl. No	Description	Amount in INR
1	Course Honorarium (Rs.3000 * 30Hrs) (Net Amount & Tax Free)	90,000 ✓
2	Deductions for local flight bookings to Bangalore and return INR (4088+ 1880)	5, 968 ✓
	Total	84,032 ✓

(Rupees Eighty four thousand and thirty two only)

In this regard, I request your approval for transferring the amount to the following Account,

Name: Malayappan Shridhar

Bank name: HDFC Bank

Branch: R.A Puram

Account No: 01411010002212

IFSC Code: HDFC 0000141

PAN No: BMGS5560Q

Thank You,

S.Sivaperumal



(Copy of the same attached)