

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All First Year UG Courses effective from the year 2025-2026

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
III	GEL	U24FTA301	TAMIL - III	60	3	25	75	100

OBJECTIVES:

- தமிழர் வரலாற்றையும், வாழ்வியல் தொன்மையையும் அறிந்து கொள்ளுதல்
- தமிழரின் பண்பாட்டினை அறிந்து கொள்ளுதல் மற்றும் தமிழ்நாட்டிற்கு வந்திணைந்த பிற பண்பாட்டுச் சூழலை உணர்ந்து கொள்ளுதல்.
- மண் சார்ந்த சமூக ஆர்வலர்களையும் ஆளுமைகளையும் அறிதல்.

COURSE OUTCOME(S)

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	தமிழக மற்றும் தமிழர் வரலாற்றை அறிந்து கொள்வர்	K5
CO2	தமிழரின் வாழ்வியல் நெறிமுறைகளை உணர்ந்து கொள்வர்	K3
CO3	தமிழகத்தின் வெவ்வேறு காலகட்டத்தின் ஆட்சி வரலாற்றை அறிவர்.	K4
CO4	தமிழ்ச் சூழலின் இன்றியமையாத காலகட்டங்களை உணர்ந்து கொள்வர்	K2
CO5	சமூகத்தின் மேம்பாட்டுக்கு உழைத்திட்ட மறுமலர்ச்சியாளர்களைத் தெளிந்து கொள்வார்.	K1

தமிழக வரலாறும் பண்பாடும் - பாடத்திட்டம்

அலகு - 1	நில வரலாறு 1. பழங்கால வரலாறு 2. திணை வாழ்வியல் 3. அகழ்வாராய்ச்சியில் தமிழர்	(12 Hours)
அலகு - 2	சமூக வரலாறு 1. சங்க கால ஆட்சிமுறை 2. அயல்நாட்டுத் தொடர்புகள் 3. கல்வியும் கலைகளும்	(12 Hours)
அலகு - 3	ஆட்சியர் வரலாறு 1. பல்லவர் மற்றும் நாயக்கர் ஆட்சி 2. முகமதியர் மற்றும் மராட்டியர் ஆட்சி 3. போர்த்துகீசியர் மற்றும் ஆங்கிலேயர் ஆட்சி	(12 Hours)
அலகு - 4	தமிழக விடுதலைப் போராட்டம் 1. விடுதலைப் போராட்டத்தில் தமிழகம் 2. இந்திய விடுதலையில் தமிழக இசுலாமியர் 3. மொழிப் போராட்டம்	(12 Hours)
அலகு - 5	சமூக மறுமலர்ச்சியாளர்கள் 1. நவாப் சி.அப்துல் ஹக்கீம் 2. டாக்டர் ஐடா ஸ்கடர் 3. டாக்டர் மு.வரதராசனார்	(12 Hours)

பார்வை நூல்கள்

- | | | | |
|---|---------------------------------|---|---|
| 1 | செய்யுள் திரட்டு | - | தமிழ்த்துறை, சி.அப்துல் ஹக்கீம் கல்லூரி, 2025 சூன் வெளியீடு |
| 2 | தமிழக வரலாறும் தமிழர் பண்பாடும் | - | டாக்டர் ஆ.இராமகிருட்டினன்
சர்வோதய இலக்கியப் பண்ணை, மதுரை - 01
பத்தாம் பதிப்பு -2012 |
| 3 | விடுதலைப் போரில் முஸ்லிம்கள் | - | வி.என்.சாமி
பாவலர் பதிப்பகம், மதுரை - 09
முதல் பதிப்பு -2009 |

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Web Sources

- Tamil Heritage Foundation- www.tamilheritage.org
- Tamil virtual University Library- [www.tamilvu.org/ library](http://www.tamilvu.org/library) <http://www.virtualvu.org/library>
- Project Madurai - www.projectmadurai.org.
- Chennai Library- www.chennailibrary.com .
- Tamil Universal Digital Library- www.ulib.prg .
- Tamil E-Books Downloads- [tamilebooksdownloads. blogspot.com](http://tamilebooksdownloads.blogspot.com)

Cos	Programme Outcomes					Programme Specific Outcomes					Mean
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	1	1	3	2	2	-	-	-	-	-	
CO2	1	2	2	3	3	-	-	-	-	-	
CO3	2	2	3	2	3	-	-	-	-	-	
CO4	3	2	2	2	3	-	-	-	-	-	
CO5	3	2	3	2	3	-	-	-	-	-	
Mean Overall Score											

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All First Year UG Courses effective from the year 2025-2026

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
IV	GEL	U24FTA401	TAMIL - IV	60	3	25	75	100

OBJECTIVES

- தமிழ் மொழியின் வழியாக அறிவியல் சிந்தனைகளை வளர்த்தல். தமிழ் இணைய பயன்பாட்டையும், அறிவியல் கலைச்சொல்லாக்கத்தையும் பயிற்றுவித்தல்.
- தமிழ்ச் சூழலில் அதிக பேசுபொருளாக இருக்கின்ற மொழி, பக்தி, நாட்டுநடப்பு மற்றும் நட்புறவு போன்றவற்றை மையப் பொருளாகக் கொண்டுள்ள தற்கால இலக்கியச் செய்திகளை விளங்க வைத்தல்.

COURSE OUTCOME(S)

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	தமிழ்மொழியின் வழியாக அறிவியல் பற்றி சிந்திக்கும் திறன் பெறுவர்.	K4
CO2	தமிழிலக்கியப் பரப்பில் நிலம்,கருவி,உயிர் முதலியவை அறிவியலால் நிகழ்ந்த மாற்றங்களை நன்கு உணர்வர்.	K5
CO3	இணைய பயன்பாட்டையும், தமிழில் அதன் நிலைப்பாட்டையும், கலைச்சொல்லின் முக்கியத்துவத்தையும் தெரிந்து கொள்வர்.	K3
CO4	மொழி, இறையான்மை, நாட்டுநடப்புச் சூழல்களை தற்கால கவிதை வழி உணர்ந்து கொள்வர்	K2
CO5	வழிபாடு, நட்புறவு, நாட்டுப்பற்று போன்ற சூழ்நிலைகளைத் தமிழ் உரைநடை இலக்கியங்கள் வழி அறிவர்.	K2

தமிழில் அறிவியலும் சூழலியலும் - பாடத்திட்டம்

அலகு - 1	தமிழரின் அறிவியல் சிந்தனைகள் 1. ஐந்திணைப் பகுப்பும் சூழலியலும் 2. தொழில்நுட்ப மேலாண்மை 3. நீர் நில மேலாண்மை	(12 Hours)
அலகு - 2	இலக்கியங்களில் அறிவியல் சிந்தனைகள் 1. நிலவியல் 2. உலோகவியல் 3. உயிரியல்	(12 Hours)
அலகு - 3	இணையத் தமிழ் 1. இணையத் தமிழ் பயன்பாடு –அறிமுகம் 2. இணையத் தமிழ்க் கல்விக் கழகம், இணைய நூலகம் 3. கலைச்சொல்லாக்கம்	(12 Hours)
அலகு - 4	தமிழ்ச் சூழலியல் (கவிதை) 1. கவிஞர். முடியரசன் - மொழி உணர்ச்சி 2. கவிக்கோ அப்துல் ரகுமான் - தவறான எண் 3. ஈரோடு தமிழன்பன் - சென்றியூ கவிதைகள்	(12 Hours)
அலகு - 5	தமிழர் சூழலியல் (உரைநடை) 1. தொ.பரமசிவம் - குலதெய்வம் 2. தி.மு.அப்துல் காதர் - முகத்தில் முகம் பார்க்கலாம் 3. வைரமுத்து - தாய்மண்	(12 Hours)

பார்வை நூல்கள்

- செய்யுள் திரட்டு - தமிழ்த்துறை, சி.அப்துல் ஹக்கீம் கல்லூரி, 2025 சூன் வெளியீடு
- அறிவியல் தமிழ் - இராதா செல்லப்பன், பாரதிதாசன் பல்கலைக்கழகம், திருச்சி.
- இணையத்தமிழ் வரலாறு - மு.பொன்ன வைக்கோ பாரதிதாசன் பல்கலைக்கழகம், திருச்சி.

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Web Sources

- Tamil Heritage Foundation- www.tamilheritage.org
- Tamil virtual University Library- www.tamilvu.org/ library <http://www.virtualvu.org/library>
- Project Madurai - www.projectmadurai.org
- Chennai Library- www.chennailibrary.com
- Tamil Universal Digital Library- www.ulib.prg
- Tamil E-Books Downloads- tamilebooksdownloads.blogspot.com
- Tamil Books on line- books.tamilcube.com

Cos	Programme Outcomes					Programme Specific Outcomes					Mean
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	2	3	2	-	-	-	-	-	
CO2	2	2	3	2	2	-	-	-	-	-	
CO3	2	2	3	2	3	-	-	-	-	-	
CO4	2	2	3	2	3	-	-	-	-	-	
CO5	2	2	2	3	3	-	-	-	-	-	
Mean Overall Score											

3 – Strong; 2 – Medium; 1 – Low

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Syllabus for Second Year UG Courses effective from the year 2025-2026

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
III	GEL	U24FUR301	URDU - III	60	3	25	75	100

Objectives:

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understand the historical evolution of the Urdu language and different linguistic perspectives.	K2
CO2	Analyze the prose and poetry contributions of renowned Urdu writers and poets	K4
CO3	Gain insights into Urdu drama, its structure, significance, and evaluate	K5
CO4	Develop an appreciation for Rubaiyat by poets	K5
CO5	Improve formal letter-writing skills for academic, personal, and professional communication.	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

UNIT – I - 15 Hours ❖❖Tareek-e-Adab-e-Urdu ❖❖Urdu Zaban Ki Ibteda-o-Irthiqa ❖❖Urdu Ke Muthaluq Mukthali Nazriyath UNIT – II - 15 Hours ❖❖Urdu Ke Nasar Nigaar aor shoura ❖❖Abdul Haleem Sharar ❖❖Prem Chand ❖❖Faiz Ahmed Faiz ❖❖Akbar Alihabadi UNIT – III - 15 Hours DRAMA ❖❖Darama Ka Tarruf ❖❖Kirshan Chender Ka Tarruf ❖❖Darwaz-e-Kholdo UNIT – IV - 15 Hours ❖❖RUBAIYAT ❖❖Mir Anees ka tarruf Gulshan Mein Phiroon Ke Sair Sehra Dehkoon ❖❖Akbar Alahbadi ka tarruf Gafath Ki Hansi Se aah Bharna Achcha ❖❖Amjad Hyderadi ka tarruf	یونٹ I- □ □ ➤ تاریخ ادب اردو ❖ اردو زبان کی ابتداء و ارتقاء ❖ اردو کے متعلق مختلف نظریات یونٹ II- ➤ اردو کے نثر نگار و شعرائ ❖ عبدالحلیم شرر ❖ پریم چند ❖ فیض احمد فیض ❖ اکبر الہ آبادی □ □ یونٹ III- ➤ ڈرامہ □ □ ❖ ڈرامہ کا تعارف ❖ کرشن چندر کا تعارف ❖ دروازے کھول دو □ □ یونٹ IV- ➤ ❖ رباعیات □ □ ❖ میر انیس کا تعارف □ □ ❖ گلشن میں پھروں کے سیر صحرا دیکھو ❖ اکبر الہ آبادی کا تعارف □ □ ❖ غفلت کی ہنسی سے آہ بھرنا اچھا ❖ امجد حیدر آبادی کا تعارف □ □ ❖ اس نام کی زندگی پہ کچھ جان تو ہو؟ ❖ اصغر وبلوری کا تعارف □ □ ❖ ڈھونڈا تو کتابوں میں صداقت نہ ملی یونٹ V- ➤ خطوط نگاری ❖ پرنسپل کے نام چھٹی کا خط □ □ ❖ والد/سرپرست کو خط، جس میں کالج کی فیس کی ادائیگی کے لیے رقم مانگی گئی ہو۔ □
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C. Abdul Hakeem College (Autonomous), Melvisharam.

Is Nam Ki Zandagi Pe Kuch Jan Tho Ho ❀❀Asghar Vellori ka tarruf Doonda Tho Kithaboon Mein Sadaqth na Mili UNIT – V - 15 Hours ❀❀Khutoot Nigari ❀❀Letter to the Principal seeking leave ❀❀Letter to the Father/Guardian asking money for payment of College fees ❀❀Letter to the Manager of a Firm seeking employment ❀❀ Letter to a publisher or book seller placing order for books	❖ ملازمت کی درخواست کرتے ہوئے مینیجر کے نام خط ❖ کتابوں کا آرڈر کرتے ہوئے پبلشر یا کتاب فروش کے نام خط
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_____ # Self Study Component for Seminar/Assignment:
 (Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

NISAB-E-JAMEEL EDITED BY Dr.S.MOHAMED YASSIR & Dr.S.MOHAMED MUDDASSIR

Reference Book:

- | | |
|---------------------|--------------------------------|
| • Deewan-e-Meer | • Kuliyaath-e-Akbar |
| • Deewan-e-Dard | • Kuliyaath-e- Iqbal |
| • Deewan-e-Ghalib | • Kuliyaath-e- Jigar |
| • Kuliyaath-e-Momin | • Kuliyaath-e- Saher Ludhyanvi |

Web Resources:

1. www.rekhta.org 2. www.urduchannel.in 3. www.urducouncil.nic.in

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2							
CO2	2	3	3	2							
CO3	3	2	3	3							
CO4	3	2	2	2							
CO5	3	3	2	3							

3 – Strong; 2 – Medium; 1 – Low

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Syllabus for Second Year UG Courses effective from the year 2025-2026

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
IV	GEL	U24FUR401	URDU - IV	90	3	25	75	100

Objectives:

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understand the fundamentals of Short Story, its definition, and artistic elements.	K2
CO2	Analyze and critically appreciate selected works of renowned Urdu fiction	K4
CO3	Evaluate the themes, social contexts, and narrative styles of selected Afsanas	K5
CO4	Develop critical thinking through Afsanas	K5
CO5	Enhance literary expression through general essays and dialogue-writing skills	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

UNIT – I -- 15 Hours

➤ AFSANA

- ❖ Afsane ki Tareef
- ❖ Afsane ka fun

یونٹ I۔

➤ □ □ افسانہ

- ❖ □ □ افسانے کی تعریف
- ❖ □ □ افسانے کا فن

UNIT – II -- 15 Hours

- ❖ Rajendra Singh Bedi ka tarruf
- ❖ Afsana-Bhola
- ❖ Prem Chand ka Tarruf
- ❖ Afsana- Kafan

یونٹ II۔

- ❖ □ □ راجندر سنگھ بیدی کا تعارف
- ❖ □ □ افسانہ بھولا
- ❖ □ □ پریم چند کا تعارف
- ❖ □ □ افسانہ - کفن

UNIT – III -- 15 Hours

- ❖ Kirshan Chender ka Tarruf
- ❖ Afsana- Jamun Ka Pard
- ❖ Ameerunisa ka Tarruf
- ❖ Afsana-Dard Ka Ehsaas

یونٹ III۔

- ❖ □ □ کرشن چندر کا تعارف
- ❖ □ □ افسانہ - جامن کا پیڑ
- ❖ □ □ امیر النساء کا تعارف
- ❖ □ □ افسانہ - درد کا احساس

UNIT – IV -- 15 Hours

- ❖ Ali Akbar Amburi ka Tarruf
- ❖ Afsana-KhushNaseeb
- ❖ Saadat Hasan Manto ka Tarruf
- ❖ Naya Qanoon

یونٹ IV۔

- ❖ □ □ علی اکبر امبوری کا تعارف
- ❖ □ □ افسانہ - خوش نصیب
- ❖ □ □ سعادت حسن منٹو کا تعارف
- ❖ □ □ افسانہ - نیا قانون

UNIT – V -- 15 Hours

➤ MAZMOON NIGARI

- ❖ Mazmoon Nigari Ki Tareef
- ❖ Akbaar Bini ke fawaid
- ❖ Computer ki Ahmiyath
- ❖ Science ke fawaid aur Nuqsanath
- ❖ Mukalama Nigari

یونٹ V۔

- □ مضمون نگاری
- ❖ مضمون نگاری کی تعریف
- ❖ اخبار بینی کے فوائد
- ❖ □ کمپیوٹر کی اہمیت
- ❖ □ سائنس کے فوائد اور نقصانات
- ❖ مکالمہ نگاری

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_____ # Self Study Component for Seminar/Assignment:

(Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

NISAB-E-JAMEEL EDITED BY Dr.S.MOHAMED YASSIR & Dr.S.MOHAMED MUDDASSIR

Reference Book:

- Deewan-e-Meer
- Deewan-e-Dard
- Deewan-e-Ghalib
- Kuliyaath-e-Momin
- Kuliyaath-e-Akbar
- Kuliyaath-e- Iqbal
- Kuliyaath-e- Jigar
- Kuliyaath-e- Saher Ludhyanvi

Web Resources:

1. www.rekhta.org
2. www.urduchannel.in
3. www.urducouncil.nic.in

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2							
CO2	2	3	3	2							
CO3	3	2	3	3							
CO4	3	2	2	2							
CO5	3	3	2	3							

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All II Year UG Courses effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>III</i>	<i>GEL</i>	<i>U24FEN301</i>	<i>English – III</i>	<i>60</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Course Objectives

CO1	To enable learners to acquire self-awareness required in various life situations.
CO2	To enable learners to inculcate positive thinking required in various life situations.
CO3	To help them acquire the attribute of empathy
CO4	To assist them in acquiring creative and critical thinking abilities
CO5	To enable them to learn the basic grammar

Unit I

Prose

1. My Vision for India – Dr. A.P.J. Abdul Kalam
2. On Saying Please – A.G. Gardiner
3. Character is Destiny – Dr. S. Radhakrishnan
4. Time and the Machine – Aldous Huxley

Unit II

Poetry

1. The Daffodils — William Wordsworth
2. Ulysses – Alfred Lord Tennyson
3. The Village School Master—Oliver Goldsmith
4. Telephone Conversation – Wole Soyinka

Unit III

Short Story

1. Three Questions – Leo Tolstoy
2. The Taxi Driver – K.S.Duggal

Unit IV

Readers Theatre

1. The Boy Comes Home – A.A. Milne
2. Love at First Sight – The Tempest – William Shakespeare

Unit V

Lexical Skills

- a) Foreign Words and Special Terminology
- b) Building Vocabulary
- c) Phrasal Verbs
- d) Idioms and Phrases

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Grammar

- a) Adverbs and its kinds
- b) Gerund, Participle, Infinitive
- c) Tenses – Introduction
- d) Present Tense
- e) Past Tense
- f) Active and Passive Voices
- g) Direct and Indirect Speeches

Communication Skills (LSRW)

- a) Expressing Sympathy
- b) Expressing Gratitude
- c) Complaining
- d) Apologizing

Composition

- a) Public Speaking
- b) Seminar
- c) Writing a Memorandum
- d) Expansion of Proverbs

Prescribed Book: New Vistas in English - III, Board of Editors, Published by Hakeem Publications, Department of English, C. Abdul Hakeem College (Autonomous), Melvisharam-632509. www.cahc.ac.in, Mail: hakeemcollege@edu.in

Web Resources

1.	Telephone Conversation - Wole Soyinka https://www.k-state.edu/english/westmank/spring_00/SOYINKA.html
2.	https://www.litcharts.com/poetry/alfred-lord-tennyson/ulysses
3.	https://www.litcharts.com/poetry/sarojini-naidu/the-gift-of-india
4.	https://onlinefreenotes.com/on-saying-please/
5.	https://sxlearningenglish.blogspot.com/2021/05/neb-grade-xi-three-questions-leo-tolstoy.html
6.	https://www.xjd.com/t-the-taxi-driver-by-kartar-singh-duggal-summary/?srsId=AfmBOooteYGglXTMpB5PyBIDdNpxxxRY3ylETvzURDpoKydTS_KZxuaB

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All II Year UG Courses effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>IV</i>	<i>GEL</i>	<i>U24FEN401</i>	<i>English – IV</i>	<i>60</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Course Objectives

CO1	To facilitate self-awareness for handling diverse life situations.
CO2	To cultivate positive thinking skills for various life scenarios.
CO3	To develop empathy as a core attribute.
CO4	To nurture creative and critical thinking abilities.
CO5	To apply acquired grammar knowledge to improve the quality and effectiveness.

Unit I

Prose

1. On Forgetting—Robert Lynd
2. The Face of Judas Iscariot – Bonnie Chamberlin
3. The Eternal Silence of These Infinite Crowds - Nirad C. Chauduri
4. The Gift of Language — J.G.Bruton

Unit II

Poetry

1. Anxiety Monster- Rhona McFerran
2. A River- A.K. Ramanujan
3. La Belle Dame Sans Merci—John Keats
4. I Know Why the Caged Bird Sings – Maya Angelou

Unit III

Short Story

1. Valiant Vicky, The Brave Weaver - Flora Annie Steel
2. A Retrieved Reformation – O Henry

Unit IV

Reader's Theatre & Extract from a play

1. The Quality of Mercy (Trial Scene from the Merchant of Venice)
2. The Giant's Wife a Tall Tale of Ireland – William Carleton

Unit V

Lexical Skills:

- a) Common Errors in English
- b) Formation of words
- c) Spelling and Sound: Introduction to Phonetics
- d) Vowels and Consonants

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Grammar:

- a) Conjunction and its kinds
- b) Interjection and its kinds
- c) Regular and Irregular Verbs
- d) Future Tense
- e) Degrees of Comparison
- f) Simple, Complex and Compound Sentences

Communication Skills (LSRW):

- a) Phoning
- b) Offering Help
- c) Asking for Information
- d) Making an Appointment

Composition:

- a) Designing a Resume and Curriculum Vitae
- b) Writing covering letter for Resume & CV
- c) Preparing Agenda for Meetings
- d) Writing Minutes of Meetings

Prescribed Book: New Vistas in English - IV, Board of Editors, Published by Hakeem Publications, Department of English, C. Abdul Hakeem College (Autonomous), Melvisharam-632509. www.cahe.ac.in, Mail: hakeemcollege@edu.in

Web Resources

1	https://www.orwellfoundation.com/the-orwell-foundation/orwell/essays-and-other-works/why-i-write/
2	https://www.litcharts.com/lit/a-retrieved-reformation/summary-and-analysis https://study.com/academy/lesson/a-retrieved-reformation-summary-themes.html
3	https://www.poetrysoup.com/poem/anxiety_monster_1100885
4	https://allpoetry.com/A-River https://writerjyotijha.medium.com/river-a-k-ramanujan-775dcc791a5e
5	https://www.savemyexams.com/igcse/english-literature/edexcel/16/revision-notes/poetry-anthology/part-3-pearson-edexcel-international-gcse-english-anthology/la-belle-dame-sans-merci/
6	https://www.folger.edu/explore/shakespeares-works/the-merchant-of-venice/read/4/1/

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
III	CC Theory	U24MCS301	Programming in JAVA	60	5	25	75	100

Objectives: Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understand the basic concepts of Java programming and data types.	K2
CO2	Apply control statements and object-oriented concepts in Java programs.	K3
CO3	Implement inheritance, packages, and interfaces for code reusability.	K3
CO4	Develop programs using exception handling and multithreading.	K4
CO5	Design graphical user interfaces using AWT and Swing components.	K6

Cognitive Levels: (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

Unit 1: (15 Hours)

History and Evolution of Java: Introduction, features and applications - JVM architecture. Data Types and Variables: Primitive data types, variable declarations and type conversion and casting. Arrays in Java: One-dimensional and multi-dimensional arrays. Operators in Java: Arithmetic, Relational, Logical, Bitwise, Assignment, and Ternary.

Unit 2: (15 Hours)

Control Statements: if, if-else, switch, while, do-while, for loops, and break/continue statements. Classes and Methods: Class structure, creating objects, and accessing class members - Defining methods, 'Static' keyword, method parameters and return types, method overloading. Constructors: Types of constructors, 'this' keyword, constructor overloading.

Unit 3: (15 Hours)

Inheritance: Introduction, Types, 'super' keywords, and method overriding - Abstract Class - 'Final' Keyword. Packages: Creating and accessing packages, built-in packages, and import statements. Interfaces: Defining interfaces, implementing interfaces, and multiple inheritance using interfaces.

Unit – IV (15 Hours)

Exception Handling: Types of exceptions, 'try', 'catch', 'finally', 'throw', and 'throws'. Multi-threading Concepts: Thread life cycle, 'Thread' class, 'Runnable' interface, and thread synchronization. Stream Classes: I/O Stream - File I/O Stream - Random Access Files. Event Handling: Event classes, event listeners, and delegation event model.

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Unit – V

(15 Hours)

Abstract Window Toolkit (AWT): Basics of AWT, creating windows, and handling events. Working with Windows and Graphics: Drawing shapes, colours, and fonts using AWT. Exploring Swing: Swing components, Frame, JButton, JTextField, Check Boxes, Radio Buttons and JPanel.

Self Study Component for Seminar/Assignment:

(Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

1. **Java: The Complete Reference** – Herbert Schildt, McGraw Hill Education, 11th Edition.

Reference Books:

1. **Programming with Java** – C. Muthu, Vijay Nicole Imprints, Second Edition.
2. **Programming with Java** – E. Balagurusamy, McGraw Hill Education, Sixth Edition.

e-Resources

Official Java Documentation: <https://docs.oracle.com/javase/tutorial/>

Online IDE for Java Practice:

- Replit: <https://replit.com/>
- JDoodle: <https://www.jdoodle.com/>
- OnlineGDB: <https://www.onlinegdb.com/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	3	3	2	-	-	-	3	3	2	2.4
CO2	3	3	2	-	-	-	3	3	1	2.2
CO3	3	3	3	-	-	-	3	3	2	2.6
CO4	3	3	3	-	-	-	3	3	2	2.6
CO5	3	3	3	-	-	-	3	3	3	3.0
Mean Overall Score										2.58

(3) – Strongly Correlated, (2) – Moderately Correlated, (1) – Slightly Correlated, (-) – No Correlation

Prepared by	Verified by
Mr.Mahfuzur Rahman M S	Dr. G Ramesh Kumar

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
III	CC Practical	U24MCSP31	JAVA PROGRAMMING LAB	60	3	25	75	100

Objectives: Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Demonstrate the usage of operators, conditional statements, and looping constructs to solve computational problems in Java.	K3
CO2	Construct Java programs using method overloading, constructors, inheritance, and interfaces for object-oriented programming.	K3
CO3	Analyze exception handling and multithreading techniques to improve program reliability and efficiency.	K4
CO4	Develop Java applications using user-defined packages and Swing components for interactive user interfaces.	K6
CO5	Design real-world Java applications integrating event-driven programming and graphical user interfaces.	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

1. Program using Operators in Java
2. Program using Arrays to Implement Multiplication of Two Matrices in Java
3. Program using Conditional Statements in Java
4. Program using Looping Statements in Java
5. Program using Method Overloading with Constructors in Java
6. Program using Single and Multilevel Inheritance in Java
7. Program using Multiple Inheritance with Interfaces in Java
8. Program using Exception Handling in Java
9. Program using Multithreading in Java
10. Program using User-Defined Packages in Java
11. Program using Simple Calculator in Java (Swing)
12. Program using Menus in Java (Swing)

C. Abdul Hakeem College (Autonomous), Melvisharam.

Text Books:

1. Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010.
2. Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999

Reference Books:

1. Head First Java, O’Rielly Publications,
2. Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.

e-Resources

1. <https://www.w3schools.com/java/>
2. <http://java.sun.com>
3. <http://www.afu.com/javafaq.html>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	Programme Outcomes						Programme Specific Outcomes			Mean
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	
CO1	3	3	3	1	-	-	3	3	1	2.42
CO2	3	3	2	-	-	-	3	3	3	2.88
CO3	3	2	3	-	-	-	3	3	2	2.66
CO4	3	3	3	2	-	-	3	3	2	2.71
CO5	3	3	3	1	-	-	3	3	3	2.71
	Mean Overall Score									2.67

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by
Masood Ahamed M	K Ifthikar Ahmed

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>III</i>	<i>SEC Theory</i>	<i>U24SCS301</i>	<i>Cloud Computing (SBS - IV)</i>	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives: Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understand the basic Concepts and Infrastructure of Cloud Computing	K2
CO2	Implement Cloud Model in Real Time	K3
CO3	Construct Different Cloud Architectures	K3
CO4	Construct various Cloud Infrastructure Mechanisms	K3
CO5	Design Security Measurements to prevent from Threat	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)**Syllabus****Unit I****(2 Hours)**

Introduction to Cloud Computing, History and Evolution of Cloud Computing, Features of Cloud, Types of Cloud, Cloud Computing Architecture

Unit II**(2 Hours)**

Cloud Computing Delivery Models, Obstacles for Cloud, Challenges and Vulnerabilities in Cloud, Practical Applications of Cloud, Cloud Storage Device

Unit III**(2 Hours)**

Cloud Architectures: Workload Distribution Architecture, Resource Pooling Architecture, Dynamic Scalability Architecture, Elastic Resource, Service Load Balance, Cloud Bursting, Redundant Storage Architecture, Hypervisor Clustering Architecture

Unit IV**(2 Hours)**

Cloud Infrastructure: Virtual Server, Usage Monitor, Resource Replication, Load Balancer, SLA, Pay per Use Monitor, Auditor Monitor, Fail over System, Hypervisor

Unit V**(2 Hours)**

Cloud Security: Basics of Cloud Security, Threat Agents, Security Threats, Security Measurements, Cloud Providers: Cloud Providers, OpenStack Clouds

Self Study Component for Seminar/Assignment:**(Questions should not be asked from self study component in the End Semester Examinations)**

C. Abdul Hakeem College (Autonomous), Melvisharam.

Text Books:

1. Thomas Erl, Zaigham Mahmood, and Ricardo Puttini, Cloud Computing: Concepts, Technology & Architecture, Prentice Hall, ISBN-13: 978-0-13-338752
2. John W. Rittinghouse and James F. Ransome, Cloud Computing: Implementation, Management, and Security, CRC Press

Reference Books:

1. George Reese, Cloud Application Architectures: Building Applications and Infrastructure in the Cloud, O'Reilly
2. Rajkumar Buyya, James Broberg, Andrzej M. Goscinski, John Wiley, Cloud Computing: Principles and Paradigms, Sons Publications

e-Resources:

https://en.wikipedia.org/wiki/Cloud_computing

<https://www.coursera.org/search?query=cloud%20computing>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	3	2	3	-	-	-	1	1	3	2.16
CO2	3	2	3	-	-	-	1	3	3	2.5
CO3	3	2	3	-	-	-	3	3	3	2.83
CO4	3	2	3	-	-	-	2	2	2	2.8
CO5	3	2	3	-	-	-	3	2	2	2.66
Mean Overall Score										2.57

- (3) – Strongly Correlated,
(2) – Moderately Correlated,
(1) – Slightly Correlated,
(-) – No Correlation

Prepared by	Verified by
Mr. K. Abdul Ahed	Dr. A. Kalimulla

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>IV</i>	<i>CC Theory</i>	<i>U24MCS401</i>	<i>Relational Database Management Systems</i>	<i>60</i>	<i>5</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives of the course

- Describe basic concepts of database system.
- Design a Data model and Schemas in RDBMS.
- Analyze functional dependencies for designing robust Database.

Objectives: Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Use the database store, organize and retrieve data efficiently	K3
CO2	Explain the concept of SQL Commands	K2
CO3	Analyze the database Structure Using FD and Normalization	K4
CO4	Design a composite key for a table, domain of variable or attribute	K3
CO5	Apply a Procedure to Perform a Specific task, cursor to retrieve and manipulate data	K3

Cognitive Levels (K1- Remember; K2-Understand; K3-Apply; K4- Analyze; K5-Evaluate, K6- Create)

UNIT I

15 hours

Introduction to DBMS– Data and Information - Database Management System- Objectives- Advantages–Components-Architecture- ER Model:Building blocks of ER Diagram

UNIT II

15 Hours

SQL: Commands– Data types– DDL- Selection - Projection, Join Operations - Set Operations - Aggregate Functions - DML–Modification - Truncation-Constraints– Sub query.

UNIT III

15 Hours

Structure of Relational Database. Introduction to Relational Database Design Objectives–Tools Redundancy and Data Anomaly - Functional Dependency -Normalization– 1NF–2NF–3NF–BCNF- Transaction Processing- Database Security.

UNIT IV

15 Hours

Relational Model: CODD's Rule - Relational Data Model-Key- Integrity– Relational Algebra Operations. Advantages and limitations– Relational- Calculus– Domain Relational Calculus - QBE.

UNIT V

15 Hours

PL/SQL: Structure- Elements–Operators Precedence - Control Structure -Iterative Control. Cursors-Procedure-Function –Packages - Exceptional Handling-Triggers.

C. Abdul Hakeem College (Autonomous), Melvisharam.

Text Books:

1. S. Sumathi, S. Esakkirajan, –Fundamentals of Relational Database Management System, Springer International Edition 2007

Reference Books:

1. Abraham Silberchatz, Henry F. Korth, S. Sudarshan, —Database System
2. Concepts, McGraw Hill 2019, 7th Edition.
3. Alexis Leon & Mathews Leon, — Fundamentals of DBMS, Vijay Nicole Publications 2014, 2nd Edition.
4. Database System Concepts, Designs and Applications Shio Kumar Singh
5. SQL, PL/SQL the Programming Language of Oracle 4th Revised Edition, Ivan Bayross.

Resources

1. NPTEL&MOO Courses titled Relational Database Management Systems
2. <https://nptel.ac.in/courses/106106093/>
3. <https://nptel.ac.in/courses/106106095/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	Programme Outcomes						Programme Specific Outcomes			Mean
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	
CO1	3	3	2	-	-	-	3	3	2	2.66
CO2	3	3	2	-	-	-	3	3	2	2.66
CO3	3	3	2	-	-	-	3	3	2	2.66
CO4	3	3	2	-	-	-	3	3	2	2.66
CO5	3	3	2	-	-	-	3	3	2	2.66
Mean Overall Score										2.66

3–Strong; 2–Medium; 1–Low

Prepared by	Verified by
Mohammed Ameenuddin R	Ifthikar Ahmed K

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>IV</i>	<i>CC Practical</i>	<i>U24MCSP41</i>	<i>PL/SQL LAB</i>	<i>45</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives: Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understand the various basic concepts of Data Base System. Difference between file system and DBMS and compare various data models.	K1
CO2	Define the integrity constraints. Understand the basic concepts of Relational Data Model, Entity Relationship Model.	K2
CO3	Classify the different functions and various join operations and enhance the knowledge of handling multiple tables.	K3
CO4	Learn to design Database operations and implement using PL/SQL programs.	K4
CO5	Learn basics of PL/SQL and develop programs using Cursors, Exceptions.	K3

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

Practical Program

I. SQL

1. Table Creation with (DDL, DML,& TCL Commands)
2. Table Creation with Constraints (PRIMARY KEY, FOREIGN KEY & NOT NULL)
3. JOINS (INNER, LEFT, RIGHT, FULL)
4. Built-in-Functions
5. Sub Queries

II. PL/SQL

6. PROCEDURES
7. FIBONACCI SERIES & SUM OF SERIES
8. FACTORIAL & REVERSE OF STRING
9. FUNCTIONS
10. CURSORS
11. TRIGGERS
12. FUNCTION WITH EXCEPTION HANDLING

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Web Resources:

1. Oracle PL/SQL Learning Library – [Learn PL/SQL with Oracle](#)
2. w3resource PL/SQL Exercises – PL/SQL Practice Problems
3. Oracle Dev Gym - Quizzes & Workouts – [Oracle Dev Gym](#)
4. GitHub SQL & PL/SQL Basics – [PL/SQL Practical Exercises](#)

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	3	3	2	-	-	-	3	3	2	2.4
CO2	3	3	2	-	-	-	3	3	1	2.2
CO3	3	3	3	-	-	-	3	3	2	2.6
CO4	3	3	3	-	-	-	3	3	2	2.6
CO5	3	3	3	-	-	-	3	3	3	3.0
Mean Overall Score										2.58

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by
K IFTHIKAR AHMED	K IFTHIKAR AHMED

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>IV</i>	<i>SEC Theory</i>	<i>U24SCS401</i>	<i>Software Engineering</i>	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives

1. To Learn Software Development Models
2. To Understand Software Design, Requirements, and Testing
3. To Gain Project Management Skills

Course Outcomes (COs) and Cognitive Level Mapping

COs	CO Statement	Cognitive Level
CO1	Remember the basic concepts of Software Engineering process.	K1
CO2	Understanding requirement analysis.	K2
CO3	Apply software design.	K3
CO4	Evaluate with different type of testing	K5
CO5	Design a complete project management plan for a real-world software application.	K6

Cognitive Levels (K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5 Evaluate;K6-Create)

UNIT I: Software Process

2 Hours

Introduction: Software Engineering – Software Process Models: Waterfall Model - Linear Sequential Model (Life Cycle Model) – Prototyping Model – Incremental Model –Spiral Model – Embedded Model – Object Oriented Model.

UNIT II: Software Requirements

2 Hours

Types of Requirement: Functional Requirements – Non-Functional Requirements – Domain Requirements – Requirements Engineering Process: Feasibility Studies – Requirement Specification: Software Requirement Specification (SRS) – Requirement validation.

UNIT III: Software Design

2 Hours

Software Design Conceptual model – Effective Modular Design: Cohesion – Coupling – Architectural Design: The Software Architecture – Architectural Design Process – Architectural Process – User Interface Design: User Interface Design Principles – Real Time System Design – Real Time system modeling.

UNIT IV: Software Testing

2 Hours

Taxonomy of Software Testing – Testing Process – Types of Testing: White Box Testing – Black Box Testing – Unit Testing – Integration Testing – Validation Testing: Elements of Validation Test – System Testing: Recovery Testing – Security Testing.

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UNIT V: Software Project Management

2 Hours

Elements of Project Management – Project Management Steps – The Project Management Spectrum: The People – The Product – The Project –Project Management Process: Project Initiation – Team Building – Project Coordination Techniques – Project Planning – Project Tracking – Project Closure.

Self Study Component for Seminar/Assignment:

(Questions should not be asked from self-study component in the End Semester Examinations)

Text Books:

1. P. UmaMaheswari, - Software Engineering, Umayam Publications, Second Edition Nov 2008

Reference Books:

1. Roger S. Pressman, —Software Engineering - A Practitioner's Approach, McGraw Hill 2010, 6th Edition.

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	2	2	2	-	-	-	2	2	2	2
CO2	2	2	2	-	-	-	2	2	2	2
CO3	2	2	2	-	-	-	2	3	2	2.1
CO4	2	2	2	-	-	-	2	3	2	2.1
CO5	2	3	3	-	-	-	3	3	2	2.6
Total	2	2.2	2.2	-	-	-	2.2	2.6	2	2.2
Mean Overall Score										2.2

3 – Strong; 2 – Medium; 1 – Low

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Syllabus for B.Sc., Computer Science effective from the year 2025-2026

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>IV</i>	<i>SEC Theory</i>	<i>U24SCS402</i>	<i>Internet of Things and Its Applications</i>	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives of the course: To equip students with knowledge and skills to identify, prevent, and mitigate cyber threats and ensuring the security of information systems and networks.

Objectives: Course Outcomes(COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Explain IoT principles and designs	K2
CO2	Distinguish between IoT architectures	K4
CO3	Evaluate protocol performance in IoT	K5
CO4	Build IoT systems using Raspberry Pi/Arduino	K3
CO5	Design IoT solutions under real constraints	K6

Cognitive Levels: (K1- Remember; K2-Understand; K3-Apply; K4- Analyse; K5-Evaluate, K6- Create)

Unit I: Introduction to IoT

(2 Hours)

Internet of Things – Physical Design – Logical Design – IoT Enabling Technologies – IoT Levels & Deployment Templates – Domain Specific IoTs – IoT and M2M – IoT Platforms Design Methodology.

Unit II: IoT Architecture

(2 Hours)

M2M high-level ETSI architecture – IETF architecture for IoT – OGC architecture – IoT reference model – Domain Model – Information Model – Function Model – Communication Model.

Unit III: IoT Protocols

(2 Hours)

Protocol Standardization for IOT – Efforts – M2M and WSN Protocols – SCADA and RFID Protocols – Unified Data Standards – Protocols – IEEE 802.15.4 – BACNet Protocol.

Unit IV: BUILDING IoT WITH RASPBERRY PI & ARDUINO

(2 Hours)

Building IoT with RASPBERRY PI – IOT Systems – Logical Design using Python – IoT Physical Devices & Endpoints –IoT Device – Building blocks – Raspberry Pi – Board.

UNIT V: REAL – WORLD APPLICATIONS.

(2 Hours)

Real world design constraints – Applications – Asset management, Industrial automation, smart grid, commercial building automation, Smart cities

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TEXT / REFERENCE BOOKS:

1. ArshdeepBahga, Vijay Madiseti, Internet of Things – A hands-on approach, Universities Press, 2015.
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), - Architecting the Internet of Things, Springer, 2011
3. Honbo Zhou – The Internet of Things in the Cloud : A Middleware Perspective, CRC Press, 2012.

Mapping of Course Outcomes (COs) with Programme Outcomes(POs) and Programme Specific Outcomes (PSOs)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	3	2	1				3	2	1	2.00
CO2	3	3	1				3	3	1	2.33
CO3	2	3	2				2	3	2	2.33
CO4	2	2	3				2	2	3	2.33
CO5	3	3	3				3	3	3	3.00
Mean	2.6	2.6	2				2.6	2.6	2	2.40
Mean Overall Score										

4. 3–Strong;2–Medium; 1–Low

PREPARED BY	VERIFIED BY
Mr. K Ashfaque Ahamed	Dr. G Ramesh Kumar