

**DEPARTMENT OF TAMIL (AIDED)**

**B.A TAMIL - AUTA**

PO NO	Programme Outcomes
PO – 1	தமிழ்மொழியை வளர்த்தல்
PO – 2	தமிழைப் பிழையின்றிப் பேசவும் எழுதவும் பயன்படுதல்
PO – 3	தமிழ் இலக்கணத்தை முறையாக அறிந்துகொள்ளுதல்
PO – 4	தமிழ் இலக்கியங்களை முழுமையாகக் கற்றுக் கொள்ளுதல்
PO – 5	பழங்காலத் தமிழர்களின் வாழ்வியல் முறைகளைத் தெரிந்துகொள்ளுதல்.

PSO NO	Programme Specific Outcomes
PSO – 1	போட்டித் தேர்வுகளில் எளிமையாக வெற்றிபெற முடியும்.
PSO – 2	எளிமையாக வேலைவாய்ப்பைப் பெற முடியும்.
PSO – 3	அரசுப்பணியில் முன்னுரிமை பெறுதல்.
PSO – 4	பத்திரிகை நிருபர் பணிக்கு முன்னுரிமை.
PSO – 5	வாழ்க்கையை செம்மைப்படுத்திக் கொள்ள இயலும்.

CO NO	Course Outcomes இக்காலக் கவிதையும் சிறுகதையும் - P1TA4 (PART 1)
CO – 1	மரபுக்கவிதை, புதுக்கவிதை ஆகியவற்றின் தன்மையை அறிய முடியும்.
CO – 2	சிறுகதையின் நிலைப்பாட்டினை உணர்தல்.
CO – 3	தமிழின் அடிப்படை இலக்கணங்களை அறிய முடியும்.
CO – 4	இக்கால இலக்கியங்களின் வரலாற்றை உணர்தல்.
CO – 5	இக்கால இலக்கியப் போக்கினை அறிதல்.

CO NO	Course Outcomes தற்கால இலக்கியம் – P3CTA7
CO – 1	மரபுக் கவிதைகளையும் புதுக்கவிதைகளையும் அறிந்துகொள்ளுதல்
CO – 2	தற்காலக் கவிஞர்களின் படைப்புகளை ஒப்பிட்டு அறிய வாய்ப்புண்டு.
CO – 3	உரைநடையின் சிறப்புத் தன்மைகளை அறிய இயலும்.
CO – 4	சிறுகதையின் வளர்ச்சிப்போக்கினையும், நாடகத்தின் இயல்புகளையும், புதினத்தின் வகைகளையும் அறிந்து கொள்ள முடியும்.
CO – 5	தற்காலப் படைப்புகளின் தன்மையை அறிந்து கொள்ளுதல்.

CO NO	Course Outcomes சைவ, வைணவ இலக்கியங்கள் – P3CTA8
CO – 1	பக்தியின் மூலம் அக்காலச் சமயங்களை அறிந்து கொள்ளுதல்.
CO – 2	சமயங்கள் மனித வளர்ச்சிக்கு உதவும் தன்மையை உணர்தல்
CO – 3	தமிழரின் பக்தி நெறியை அறிந்து கொள்ளுதல்.
CO – 4	பக்தியின் உண்மைத் தன்மையை விளங்கிக் கொள்ள முடியும்.
CO – 5	நாயன்மார்கள் ஆழ்வார்களைப் பற்றி அறிய இயலும்.

CO NO	Course Outcomes இதழியல் அறிமுகம் - 1 – P3ATA4
CO – 1	இதழியலின் நோக்கங்களை அறிந்துகொள்ள முடியும்.
CO – 2	இதழியலின் தற்கால வளர்ச்சியை உணர்ந்து கொள்ளுதல்.
CO – 3	இதழியல் சட்டங்களை நன்கு அறிய இயலும்.
CO – 4	செய்தியாளருக்குரிய தகுதிகளை அறிந்துகொள்ளுதல்.
CO – 5	பத்திரிகையின் வடிவமைப்பை தெரிந்துகொள்ள வாய்ப்புண்டு.

CO NO	Course Outcomes பக்தி இலக்கியம் - சிற்றிலக்கியம் - புதினம் - Q1TA5 (PART 1)
CO – 1	பக்தி இலக்கியத்தை அறிமுகப்படுத்துதல்.
CO – 2	சிற்றிலக்கியத்தின் தோற்றத்தை அறிதல்.
CO – 3	புதின இலக்கியத்தைக் கற்றல்.
CO – 4	சொல் வகைகளை அறிதல்.
CO – 5	இடைக்கால இலக்கிய வரலாற்றை அறிதல்

CO NO	Course Outcomes காப்பிய இலக்கியம் – Q3CTA9
CO – 1	காப்பிய வகைகளைத் தெரிந்து கொள்ளுதல்.
CO – 2	காப்பியங்களின் வழியாக இறைச்சிந்தனைகளை வளர்த்துக்கொள்ள முடியும்.
CO – 3	சமயம் சார்ந்த காப்பியத்தினை அறிந்து கொள்ள இயலும்.
CO – 4	தமிழரின் காப்பிய நெறியை தற்காலத்தில் பொருத்திப் பார்க்க வாய்ப்புண்டு.
CO – 5	காப்பியங்கள் உணர்த்தும் சமயப் பொதுமையை அறிந்துகொள்ள முடியும்.

CO NO	Course Outcomes தமிழர் வளர்த்த அழகுக்கலைகள் – Q3CTA10
CO – 1	நமது பண்பாட்டு மையமாக விளங்கக் கூடிய கோயில்கள் பற்றி அறிந்துகொள்ள முடியும்.
CO – 2	கோயில்கள் வாயிலாக தமிழர்கள் வளர்த்த கலைகளைக் கண்டு உணர்தல்.
CO – 3	இசை, இசைக்கலைஞர்களை அறிந்துகொள்ளுதல்.
CO – 4	ஓவியக் கலையின் பழமைகளை உணர்ந்து கொள்ளுதல்
CO – 5	ஆடற்கலையின் வகைகளை நன்கு அறிய இயலும்.

CO NO	Course Outcomes இதழியல் அறிமுகம் - 2 – Q3ATA5
CO – 1	இதழியல் தொடர்பான சிந்தனைகளை அறிய வாய்ப்புண்டு.
CO – 2	இதழியலின் படிநிலைகளை அறிய இயலும்.
CO – 3	படங்கள் குறித்த தகவல்களை அறிதல்.
CO – 4	கருத்துப் படங்களின் முக்கியத்துவத்தை அறிதல்
CO – 5	மின் இதழ்களின் வழியாகச் செய்திகளை அறிந்துகொள்ளுதல்.

CO NO	Course Outcomes காப்பிய இலக்கியமும் நாடகமும் - R1TA6 (PART 1)
CO – 1	தமிழ்க் காப்பியங்களின் பல்வேறு வகைகளை அறிமுகம் செய்தல்.
CO – 2	தமிழ் நாடக நூல்களை அறிமுகம் செய்தல்.
CO – 3	விடுதலை வீரர் அழகுமுத்துக்கோனின் வரலாற்றை அறிதல்
CO – 4	பா வகைகள், அணிகளை அறிமுகம் செய்தல்.
CO – 5	காப்பிய கால வரலாற்றினை உணர்தல்.

CO NO	Course Outcomes நன்னூல் (எழுத்து) – R3CTA7
CO – 1	தமிழ் எழுத்திலக்கணத்தை அறிந்து கொள்ளுதல்.
CO – 2	எழுத்துக்களின் பிறப்பிலக்கணத்தை உணர்தல்.
CO – 3	புணர்ச்சி இலக்கணத்தை அறிய இயலும்.
CO – 4	தமிழ்மொழி எழுத்துக்களின் நுட்பங்களை அறிய முடியும்.
CO – 5	புணர்ச்சியின் வகைகளை அறிய வாய்ப்புண்டு.

CO NO	Course Outcomes தமிழக வரலாறும் பண்பாடும் – R3ETA4
CO – 1	தமிழர்களின் பண்டைய கால வாழ்வியலை விளங்கிக் கொள்ள முடியும்.
CO – 2	இருண்டகாலத் தமிழகத்தை அறிய இயலும்.
CO – 3	பல்வேறு வகையான அரசர்களின் ஆட்சித்திறத்தை உணர்தல்.
CO – 4	சோழர்கால அரசியல் நிலையை ஒப்பிட்டு அறிய வாய்ப்புண்டு.
CO – 5	நாயக்கர் கால ஆட்சித் திறத்தை விரிவாக அறிந்து கொள்ளுதல்.

CO NO	Course Outcomes மக்கள் ஊடகத் தொடர்பியல்-1– R3ATA5
CO – 1	இதழியல் முன்னோடிகளை அறிந்து கொள்ள முடியும்.
CO – 2	முன்னோடி இதழ்களின் தமிழ்ப் பணிகளை உணர்ந்து கொள்ள முடியும்.
CO – 3	மின்னணு ஊடகங்களை தெரிந்து கொள்ளுதல்.
CO – 4	மக்கள் ஊடகத் தொடர்புக் கோட்பாடுகளை அறிந்துகொள்ளுதல்.
CO – 5	ஊடக நிர்வாக அமைப்பு முறையை அறிய இயலும்.

CO NO	Course Outcomes அடிப்படைத்தமிழ் -1– R4NFTA3 (NME)
CO – 1	தமிழ் பயிலாதவர்கள் தமிழை அறிந்து கொள்ளுதல்.
CO – 2	தமிழ் எழுத்துக்களையும் வாக்கியங்களையும் அறிய முடியும்.
CO – 3	மொழித்திறனை வளர்த்துக் கொள்ளுதல்.
CO – 4	சிறு தொடர்களை தெரிந்து கொள்ள இயலும்.
CO – 5	பாடல்களையும், கதைகளையும் பிழையின்றி வாசிக்க முடியும்.

CO NO	Course Outcomes சிறப்புத்தமிழ் -1– R4NATA3 (NME)
CO – 1	பகுதி 1 தமிழ்ப்பாடத்தைப் பயிலாதவர்கள் கவிதை, சிறுகதைகளை அறிந்துகொள்ள வாய்ப்புண்டு.
CO – 2	தமிழ் மொழியைப் பிழையற எழுதக்கூடிய வழிமுறைகளை அறிந்துகொள்ளலாம்.
CO – 3	நல்ல தமிழில் எழுத முடியும்.
CO – 4	கடிதங்கள் எழுதக் கற்றுக்கொள்ளுதல்.
CO – 5	படைப்பாற்றல் திறனை வளர்த்துக்கொள்ள முடியும்.

CO NO	Course Outcomes கால மேலாண்மை (SSP) – R3STA3
CO – 1	சினித்திச் செயல்படும் திறனை வளர்த்துக்கொள்ள முடியும்.
CO – 2	நேரம் தவறாத பண்பினை வளர்த்துக்கொள்ள முடியும்.
CO – 3	நேரத்தை நிர்ணயம் செய்யக் கற்றுக்கொள்ளுதல்.
CO – 4	நேரத்தைப் பின்பற்றி வாழவேண்டிய நெறிமுறைகளை அறிதல்.
CO – 5	பணியிடங்களில் நேரத்தை முறையாகப் பயன்படுத்த நெறிப்படுத்திக் கொள்ளுதல்.

CO NO	Course Outcomes சங்க இலக்கியம் - அற இலக்கியம் - உரைநடை – S1TA7 (PART 1)
CO – 1	சங்க இலக்கியங்களின் அடிப்படைகளை அறிதல்.
CO – 2	அற இலக்கியத்தின் முக்கியத்துவத்தை உணர்தல்.
CO – 3	உரைநடையின் தன்மையை அறிதல்.
CO – 4	அகப்புற இலக்கணங்களைத் தெரிந்து கொள்ளுதல்.
CO – 5	சங்ககால இலக்கிய வரலாற்றை அறிய இயலும்.

CO NO	Course Outcomes நன்னூல் ( சொல் ) – S3CTA9
CO – 1	தமிழில் மரபிலக்கணத்தை அறிய இயலும்.
CO – 2	தமிழ் மொழியைப் பிழையின்றிப் பேசவும் எழுதவும் முடியும்.
CO – 3	சொல்லின் இலக்கணத்தை அறிந்துகொள்ள முடியும்.
CO – 4	சொல் இலக்கணத்தின் வகைகளை அறிதல்.
CO – 5	தமிழ்ச் சொற்களின் உருவாக்க முறையினைத் தெரிந்துகொள்ள முடியும்.

CO NO	Course Outcomes சங்க மருவிய கால இலக்கியங்கள் – S3CTA10
CO – 1	அறத்தின் தேவையை உணர்ந்து கொள்ள முடியும்.
CO – 2	அற இலக்கிய வரலாற்றை அறியலாம்.
CO – 3	அறநெறிகளைப் பின்பற்ற வாய்ப்பு உண்டு.
CO – 4	பழமொழிகளை ஒப்பிட்டு அறிய இயலும்.
CO – 5	நீதிநெறி முறைகளை அறிந்துகொள்ள முடியும்.

CO NO	Course Outcomes மக்கள் ஊடகத் தொடர்பியல் - 2 – S3ATA6
CO – 1	மக்கள் தொடர்பு ஊடகங்களை தெரிந்து கொள்ள முடியும்.
CO – 2	சிறுவர், புலனாய்வு இதழ்களின் சிறப்புகளை அறிய இயலும்.
CO – 3	வர்த்தக இதழியலின் வளர்ச்சியினை அறிய முடியும்.
CO – 4	வர்த்தக இதழியலின் தன்மைகளை உணர்ந்து கொள்ள முடியும்.
CO – 5	விளம்பரத்தின் நன்மை தீமைகளை ஒப்பிட்டு அறிய முடியும்.

CO NO	Course Outcomes அடிப்படைத்தமிழ் - 2 – S4NFTA4 (NME)
CO – 1	சொற்பொருள்களை அறிய வாய்ப்பு உண்டு.
CO – 2	வாக்கியத் தொடர் அமைப்பை அறிந்து கொள்ள முடியும்.
CO – 3	தமிழைப் படிக்கக் கற்றுக் கொள்ள முடியும்.
CO – 4	பிழையில்லாமல் எழுத முடியும்.
CO – 5	தமிழில் மொழிபெயர்க்க அறிதல்

CO NO	Course Outcomes சிறப்புத்தமிழ் - 2 – S4NATA4 (NME)
CO – 1	அறக்கருத்துக்களை உணர்ந்து கொள்ளுதல்.
CO – 2	படைப்பாற்றல் திறனை வளர்த்துக் கொள்ள முடியும்.
CO – 3	சொற்றொடர்களைக் கையாளும் முறைகளை அறிய இயலும்.
CO – 4	நிறுத்தற்குறிகளை அறிந்து கொள்ள வாய்ப்பு உண்டு.
CO – 5	கட்டுரைகளை எழுதப் பயிற்சி பெற்றுக் கொள்ளுதல்.



CO NO	Course Outcomes விளம்பரக்கலை (SSP) – S3STA3
CO – 1	இந்திய விளம்பர வரலாற்றை தெரிந்து கொள்ளுதல்.
CO – 2	விளம்பரத்தின் இயல்புகளையும், நோக்கங்களையும் கற்றுக் கொள்ள முடியும்.
CO – 3	விளம்பரத்தின் வகைகளை அறிந்துகொள்ள முடியும்.
CO – 4	விளம்பரத்துறையில் வேலைவாய்ப்பைப் பெற முடியும்.
CO – 5	விளம்பரங்களின் மொழிநடையினைத் தெரிந்துகொள்ள முடியும்.

CO NO	Course Outcomes யாப்பு, அணி – T3CTA15
CO – 1	செய்யுள் உறுப்புகளைத் தெளிவாக அறிய இயலும்.
CO – 2	செய்யுள் அலங்காரம் தோன்றக்கூறும் முறையை உணர்ந்து கொள்ளல்.
CO – 3	நால்வகைப் பாக்களின் அமைப்புப் போக்கினை அறிந்து கொள்ள முடியும்.
CO – 4	ஓசைகளின் வகைகளை அறிய முடியும்.
CO – 5	அணியிலக்கண முறையை அறிந்துகொள்ள முடியும்.

CO NO	Course Outcomes மொழியியலும் மொழிபெயர்ப்பியலும் – T3CTA16
CO – 1	தமிழ் மொழியின் மேன்மையை அறிய இயலும்.
CO – 2	மொழியியலின் வரலாற்றை அறிந்துகொள்ள முடியும்.
CO – 3	ஒலியன், உருபன்களின் வேற்றுமையை ஒப்பிட்டு அறிய வாய்ப்பு உண்டு.
CO – 4	ஒலியுறுப்புகளின் தொழிலை அறிந்து கொள்ள முடியும்.
CO – 5	மொழிபெயர்ப்பின் இன்றியமையாமையை தெரிந்து கொள்ள முடியும்.

CO NO	Course Outcomes தமிழ் இலக்கிய வரலாறு – T3ETA3
CO – 1	இலக்கியங்களை விரும்பிக் கற்க முடியும்.
CO – 2	முச்சங்கங்கள் இருந்தமைக்கான சான்றுகளை அறிய முடியும்.
CO – 3	சிற்றிலக்கியங்களின் வளர்ச்சியினை அறிய முடியும்.
CO – 4	தற்கால இலக்கியங்களின் போக்குகளை அறிய முடியும்.
CO – 5	மடங்கள் வளர்த்த தமிழினை அறிந்து கொள்ளுதல்.

CO NO	Course Outcomes சிற்றிலக்கியம் – T3CTA17
CO – 1	சிற்றிலக்கியத் தோற்றத்தின் சிறப்புகளை அறிய முடியும்.
CO – 2	சிற்றிலக்கிய வகைகளை அறிந்து கொள்ளல்.
CO – 3	தமிழ் இலக்கிய வளர்ச்சிக்குச் சிற்றிலக்கியங்களின் பங்களிப்பைத் தெரிந்து கொள்ளுதல்
CO – 4	தூது இலக்கியத்தின் இலக்கணம் மற்றும் முக்கியத்துவத்தை அறிந்துகொள்ள முடியும்.
CO – 5	பள்ள இலக்கியத்தை அறிய இயலும்.

CO NO	Course Outcomes திரைப்படக்கலை (SSP) – T3STA5
CO – 1	சினிமாவின் மூலம் சமூகப்புரட்சி ஏற்பட்டதை தெரிந்து கொள்ளுதல்.
CO – 2	கேமராவின் இயல்புகளை அறிந்து கொள்ளுதல்.
CO – 3	சினிமாவின் தன்மைகளைத் தெரிய இயலும்.
CO – 4	அரசியலில் சினிமாவின் பங்களிப்பினைத் தெரிந்து கொள்ளுதல்
CO – 5	சினிமாவைப் பற்றிய உண்மைகளை அறிய இயலும்.

CO NO	Course Outcomes தமிழின் செம்மொழிப் பண்புகள் – U3CTA23
CO – 1	தமிழின் தொன்மையினை அறிய இயலும்.
CO – 2	செவ்வியல் சொற்பொருள் விளக்கங்களை அறிந்துகொள்ள முடியும்
CO – 3	தமிழ்ச் செம்மொழி நூல்களை அறிந்துகொள்ள இயலும்.
CO – 4	தமிழ்ச் செம்மொழியின் பண்புகளை தெரிந்து கொள்ளல்.
CO – 5	தமிழ்மொழியின் பாடுபொருள் சிறப்புகளை விரிவாக அறிதல்.

CO NO	Course Outcomes பண்டைய இலக்கியம் – U3CTA24
CO – 1	பண்டைய இலக்கியங்களை அறிந்து கொள்ளுதல்.
CO – 2	ஆற்றுப்படை இலக்கியங்களின் வளங்களை அறிதல்.
CO – 3	சங்கத்தமிழ் இலக்கியங்களின் பொருள் வளங்களை அறிய இயலும்.
CO – 4	சங்ககாலத் தமிழ் மக்களின் வாழ்வியல் பண்பாட்டினைத் தெரிந்து கொள்ளுதல்.
CO – 5	சங்ககால மன்னர்களின் போர்முறைகளை அறிதல்.

CO NO	Course Outcomes போட்டித் தேர்வுத் தமிழ் – U3CTA22
CO – 1	இலக்கண விதிகளை எளிதில் புரிந்து கொள்ள முடியும்.
CO – 2	தமிழிலக்கியத்தை முழுமையாக அறிய இயலும்.
CO – 3	போட்டித் தேர்விற்கான வழியை அறிதல்.
CO – 4	போட்டித் தேர்வுகளில் எளிமையாக வெற்றிபெற முடியும்.
CO – 5	அரசுப்பணிக்குச் செல்ல வாய்ப்புண்டு.

CO NO	Course Outcomes நாட்டுப்புறவியல் – U3CTA25
CO – 1	நாட்டுப்புறக் கலைகளை அறிய வாய்ப்பு உண்டு.
CO – 2	நாட்டுப்புற ஆடல்களை தெரிந்து கொள்ளல்.
CO – 3	நாட்டுப்புற விளையாட்டுகளையும், நம்பிக்கைகளையும் அறிந்துகொள்ளுதல்.
CO – 4	நாட்டுப்புறக் கதைகளின் தன்மைகளை அறிதல்.
CO – 5	விடுகதைகள் மற்றும் புராணங்களைப் பற்றி அறிந்துகொள்ள முடியும்.

CO NO	Course Outcomes வெற்றிப்படைகள் (SSP) – (SUBJECT CODE)
CO – 1	இன்றைய சூழலில் தேர்வுமுறைகளை அறிந்து கொள்ளல்.
CO – 2	இந்திய ஆட்சிப்பணித் தேர்வினை எதிர்கொள்ளத் தயாராகுதல்.
CO – 3	தேர்வு பற்றிய அனுகுமுறைகளைத் தெரிதல்.
CO – 4	நேர்முகத்தேர்வினை எதிர்கொள்ளும் முறையினை அறிய இயலும்.
CO – 5	போட்டித்தேர்வு சிந்தனைகளைப் பெறுதல்

### M.A TAMIL - APTA

PO NO	Programme Outcomes
PO – 1	இலக்கிய, இலக்கணங்களை செம்மையாக அறிந்துகொள்ளல்.
PO – 2	அறநெறிகளை உணர்ந்து கொள்ள இயலும்.
PO – 3	தமிழர்களின் பண்பாடு,கலாச்சாரங்களை அறிந்துகொள்ள முடியும்.
PO – 4	நாட்டுப்புற இலக்கியங்களை வாழ்வியலோடு பொருத்திப் பார்க்க இயலும்.
PO – 5	ஊடகத்தில் பணி வாய்ப்பைப் பெறுதல்.

PSO NO	Programme Specific Outcomes
PSO – 1	தமிழின் தொன்மைகளையும், பெருமைகளையும் உலகிற்கு அறிமுகப்படுத்த இயலும்.
PSO – 2	தமிழ் இலக்கணங்களின் வழி தெளிவாக உச்சரிக்கும் தன்மையைப் பெறுதல்.
PSO – 3	பேச்சாளராக, படைப்பாளராக உருவாக வழிவகை செய்தல்.
PSO – 4	பழங்கால அரசியல் நிலையை அறிந்துகொள்ள முடியும்.
PSO – 5	பத்திரிகை அலுவலக வேலைவாய்ப்பில் முன்னுரிமை.

CO NO	Course Outcomes புதுமை இலக்கியம் – P6CTA11
CO – 1	புதுமைக்காலக் கவிதைகளின் பாடுபொருளை அறிய இயலும்.
CO – 2	மரபுக்கவிதை, புதுக்கவிதையின் வேறுபாட்டை அறிதல்.
CO – 3	சிறுகதை , நாவல் இலக்கிய வகைமைகளை உணர முடியும்.
CO – 4	உரைநடை, நாடக இலக்கியத்தின் தேவையைத் தெரிந்துகொள்ள முடியும்.
CO – 5	கவிஞர்களின் படைப்பாற்றல் திறனை அறிய இயலும்.

CO NO	Course Outcomes தொல்காப்பியமும் மொழியியலும் (எழுத்து) – P6CTA14
CO – 1	தொடக்க கால எழுத்திலக்கண மரபை அறிந்து கொள்ள இயலும்.
CO – 2	எழுத்துக்களின் பிறப்பு, புணர்ச்சி இலக்கணத்தைப் புரிந்து கொள்ள முடியும்.
CO – 3	எழுத்திலக்கணம் மற்றும் மொழியியலின் தேவையை உணர்தல்.
CO – 4	தமிழ் இலக்கண நூல்களின் வகைமைகளைக் கண்டறிய முடியும்.
CO – 5	மேலைநாட்டாரின் மொழியியல் சிந்தனைகளைத் தெரிந்துகொள்ள முடியும்.

CO NO	Course Outcomes தமிழ் இலக்கிய வரலாறு – P6CTA13
CO – 1	தமிழ்மொழியின் இலக்கிய வகைகளையும் நுட்பங்களையும் உணர்ந்து கொள்ள முடியும்.
CO – 2	காலந்தோறும் சமுதாயத்தில் ஏற்பட்ட மாற்றங்களை அறிய இயலும்.
CO – 3	இலக்கியங்கள் உணர்த்தும் உண்மையை உணர்தல்.
CO – 4	காப்பியங்களின் தன்மை மற்றும் வகைகளை அறிந்துகொள்ள முடியும்.
CO – 5	நாடகம், கதை, பாட்டிலக்கியங்களை நுட்பமாக அறிதல்.

CO NO	Course Outcomes வைணவ இலக்கியம் - P6CTA12
CO – 1	பக்தி இலக்கியம் தோன்றிய பின்னணியை உணர்தல்
CO – 2	வைணவ இலக்கியக் காலத்தில் இருந்த சமுதாய நிலையை அறிந்துகொள்ள முடியும்.
CO – 3	வைணவ இலக்கியங்கள் புலப்படுத்தும் இறைப் பொதுமையை உணர முடியும்.
CO – 4	வைணவக் கொள்கைகளை அறிய முடியும்.
CO – 5	வைணவப் பாடல்களின் சூழலியல் சிந்தனைகளை அறிய இடமுண்டு.

CO NO	Course Outcomes தகவல் தொடர்பியல் அறிமுகம் - P6ETA3
CO – 1	தொடர்பியல் நோக்கங்களை அறிய முடியும்.
CO – 2	தொடர்பியலில் ஒலிகள், குறியீடுகளின் முக்கியத்துவத்தை அறிதல்.
CO – 3	தொடர்பு வகைகள்,வடிவங்களை அறிந்துகொள்ள இயலும்.
CO – 4	தொடர்பாளர்களின் பண்புகளை அறிந்து கொள்ளுதல்.
CO – 5	தொடர்பியல் மாதிரிகளை அறிய முடியும்.

CO NO	Course Outcomes தொல்காப்பியமும் மொழியியலும் (சொல்) – Q6CTA16
CO – 1	சொல்லிலக்கணத்தை உணர முடியும்.
CO – 2	வேற்றுமை இலக்கணங்களின் வழியாக பிழையின்றி எழுதக் கற்றுக்கொள்ள முடியும்.
CO – 3	தமிழ்ச் சொற்களின்மரபு, திரிபுகளை அறிந்து கொள்ள இயலும்.
CO – 4	மொழியியல் உணர்த்தும் உருபன் குறித்துத் தெரிந்துகொள்ள முடியும்.
CO – 5	மொழியியலாளர்களின் மாற்றிலக்கணங்களை அறிய இடமுண்டு.

CO NO	Course Outcomes சிற்றிலக்கியம்; - Q6CTA17
CO – 1	சிற்றிலக்கிய வரையறைகளை அறிதல்.
CO – 2	சிற்றிலக்கியத் தோற்றப் பின்னணியை தெரிந்துகொள்ள முடியும்.
CO – 3	சிற்றிலக்கிய உத்திகள், கொள்கைகளை அறிய முடியும்.
CO – 4	சிற்றிலக்கியச் சமுதாயப் பின்புலத்தைத் தெரிந்து கொள்ளலாம்.
CO – 5	சிற்றிலக்கியங்களின் வழி நாட்டுப்புறப் பாடல்களை அறிய இடமுண்டு.

CO NO	Course Outcomes நாட்டுப்புறவியல் - Q6CTA18
CO – 1	வாய்மொழி இலக்கியத்தின் தனிச்சிறப்பை உணர முடியும்.
CO – 2	நாட்டுப்புறக் கலைகளின் மூலம் தொழில் வாய்ப்பை செயல்படுத்த முடியும்.
CO – 3	நாட்டுப்புற இயலின் மேன்மையை விளங்கிக் கொள்ளல்.
CO – 4	நாட்டுப்புற மக்களின் பழக்க வழக்கங்களை அறிதல்.
CO – 5	நாட்டுப்புறக் கோட்பாடுகளை கதைகள், கதைப்பாடல்களில் பொருத்திப் பார்க்க இயலும்.

CO NO	Course Outcomes இலக்கியத் திறனாய்வு – Q6CTA19
CO – 1	திறனாய்வு குறித்த விளக்கங்களை அறிந்து கொள்ளுதல்.
CO – 2	திறனாய்வின் தேவையை உணர்ந்துகொள்ள இயலும்.
CO – 3	இலக்கியத்தைத் திறனாய்வு நோக்கில் அறிந்துகொள்ள முடியும்.
CO – 4	தற்கால இலக்கியங்களில் திறனாய்வுப் போக்குகளைப் புகுத்திப் பார்க்கலாம்.
CO – 5	ஒப்பீட்டு முறையில் திறனாய்வை அறிய முடியும்.

CO NO	Course Outcomes அச்ச மின்னணு ஊடகங்கள் - Q6ETA4
CO – 1	தொடக்ககால இதழியல் ஆசிரியர்களை அறிந்து கொள்ளல்.
CO – 2	இதழ்களினால் இலக்கியங்களின் வளர்ச்சியை அறிய இயலும்.
CO – 3	இதழியல் கோட்பாடுகளைத் தெரிந்து கொள்ள முடியும்.
CO – 4	செய்தி, செய்திக் கூறுகளை அறிதல்.
CO – 5	பத்திரிகைச் சட்டங்களைத் தெரிந்து கொள்ள முடியும்.

CO NO	Course Outcomes இலக்கணம் பொருள் - 1 – R6CTA22
CO – 1	சங்ககால மக்களின் வாழ்வியலை உணர்ந்து கொள்ள முடியும்.
CO – 2	பழந்தமிழரின் இலக்கிய நயங்களை அறிதல்.
CO – 3	அகத்திணை மாந்தர்களை அறிந்துகொள்ள இயலும்.
CO – 4	தமிழ் இலக்கண மரபை அறிதல்.
CO – 5	பண்டைத் தமிழர்களின் பண்பாட்டினைப் உணர முடியும்.



CO NO	Course Outcomes காப்பிய இலக்கியம் - R6CTA19
CO – 1	காப்பிய இலக்கியங்களின் தோற்றம், வளர்ச்சி குறித்து அறிதல்.
CO – 2	தமிழில் இரட்டைக் காப்பியங்களை ஒப்பிட்டு அறிய முடியும்.
CO – 3	ஐம்பெருங்காப்பியங்களின் வகைகளை அறிதல்.
CO – 4	காப்பியங்களின் ஒருமைப்பாட்டுணர்வை புரிந்துகொள்ள இயலும்.
CO – 5	காப்பியகால மக்களின் வாழ்வியல் முறைகளை அறிதல்.

CO NO	Course Outcomes அற இலக்கியம் - R6CTA20
CO – 1	அறத்தின் தேவையை உணர்தல்.
CO – 2	அற இலக்கிய வரலாற்றை அறிதல்.
CO – 3	அறநெறிகளைப் பின்பற்றி வாழ்க்கையைச் செம்மைப்படுத்த இயலும்.
CO – 4	பழமொழிகளின் வழி அறச்சிந்தனைகளை அறிதல்.
CO – 5	அற இலக்கியங்களில் உள்ள பண்பாட்டுச் செய்திகளை அறிந்து கொள்ள முடியும்.

CO NO	Course Outcomes தமிழ்ச்செம்மொழி வரலாறு – R6CTA21
CO – 1	தமிழ்மொழிக் குடும்பங்களை அறிந்து கொள்ளல்.
CO – 2	தமிழின் தொன்மையை உணர முடியும்.
CO – 3	செம்மொழியின் பொதுமைப் பண்புகளை தெரிந்து கொள்ளுதல்.
CO – 4	தமிழின் செம்மொழி நூல்களைத் தெரிந்துகொள்ள முடியும்.
CO – 5	உலகச் செம்மொழிகளை அறிந்துகொள்ள இயலும்.

CO NO	Course Outcomes விளம்பர அடிப்படைகள் புதிய பரிமாணங்கள் - R6ETA5
CO – 1	மக்கள் தொடர்பு அறிஞர்களின் கருத்துக்களை தெரிதல்.
CO – 2	விளம்பரத்தைப் பற்றிய அறிவைப் பெற இயலும்.
CO – 3	விளம்பரத்தாக்கத்தை உணர்தல்.
CO – 4	வர்த்தக இதழியல் பற்றித் தெரிந்து கொள்ளுதல்.
CO – 5	தொடர்பு கோட்பாடுகளை அறிதல்.

CO NO	Course Outcomes இலக்கணம் பொருள் - 2 – S6CTA21
CO – 1	திணை, துறைகளை மாணவர்கள் அறிய இயலும்.
CO – 2	போர் பற்றிய சிந்தனைகளை அறிந்து கொள்ளுதல்.
CO – 3	மெய்ப்பாட்டின் வகைகளைக் கற்றுக் கொள்ளுதல்.
CO – 4	வண்ணம்,வனப்பை உணர்தல்.
CO – 5	மரபியலின் தன்மைகளை உணர்ந்துகொள்ள முடியும்.

CO NO	Course Outcomes பண்டைய இலக்கியம் - S6CTA23
CO – 1	பழந்தமிழ் இலக்கியங்களைக் கற்றல்.
CO – 2	பழந்தமிழரின் வாழ்வியல் முறைகளை உணர்தல்
CO – 3	இயற்கைச் சூழலை அறிய முடியும்.
CO – 4	பண்டைய இலக்கியங்களின் வழி மக்களின் நம்பிக்கையை அறிதல்.
CO – 5	இலக்கிய இன்பம் பற்றி அறிந்து கொள்ளல்.

CO NO	Course Outcomes தமிழர் நாகரிகமும் பண்பாடும் - S6CTA22
CO – 1	பண்டைத்தமிழரின் வாழ்க்கைக் கொள்கைகளை உணர்தல்.
CO – 2	பண்பாட்டில் சமயங்களின் பங்களிப்பினை தெரிந்து கொள்ளுதல்.
CO – 3	தமிழரின் நாகரிகத்தையும் பண்பாட்டையும் அறிய முடியும்.
CO – 4	பழந்தமிழரின் உணவு முறைகளை அறிதல்.
CO – 5	தமிழ்ப் பண்பாட்டில் சமயங்களின் வளர்ச்சி நிலையை அறிதல்.

CO NO	Course Outcomes ஆளுமைத்திறனும் கோட்பாடுகளும் - S6CTA24
CO – 1	ஆளுமை பற்றிய அறிஞர்களின் விளக்கங்களை அறிய முடியும்.
CO – 2	இலக்கியத்தில் ஆளுமையின் வளர்ச்சியை தெரிந்து கொள்ளுதல்.
CO – 3	ஆளுமைத்திறன் மேம்படும்.
CO – 4	ஆளுமை வகைகளை அறிதல்.
CO – 5	ஆளுமைக் கோட்பாடுகளை புரிந்து கொள்ளுதல்.

CO NO	Course Outcomes மக்கள் தகவல் தொடர்புப் பயிற்சி – S6ETAL2
CO – 1	செம்மையாக்கக் குறியீடுகளை அறிதல்.
CO – 2	பத்திரிகைகளில் மொழிபெயர்ப்பின் இன்றியமையாமையை உணர்தல்
CO – 3	பத்திரிகையின் கூறுகளை எழுதக் கற்றுக் கொள்ளுதல்.
CO – 4	பத்திரிகை உருவாக்கக் கற்றுத்தருதல்.
CO – 5	பத்திரிகை அலுவலகப் பயிற்சிபெற்று செய்தி ஆசிரியராக உருவாக முடியும்.

CO NO	Course Outcomes ஆட்சித்தமிழ் (SSP) – S6STA3
CO – 1	தமிழ் ஆட்சிமொழியின் வரலாற்றை அறிய முடியும்.
CO – 2	ஆட்சிமொழித் திட்டங்களின் அரசாணைகளை அறிதல்.
CO – 3	ஆட்சிமொழி ஆய்வில் கண்டறியப்பட்ட உண்மைகளை அறிய முடியும்.
CO – 4	தமிழ் வளர்ச்சித் திட்டங்களை அறிதல்.
CO – 5	தமிழ்மொழி வளர்ச்சித் திட்டங்களில் உள்ள நிறை, குறைகளை அறிதல்.

### M. Phil TAMIL - AMTA

PO NO	Programme Outcomes
PO – 1	ஆய்வேட்டின் தன்மையை உணர்தல்.
PO – 2	முதுநிலை ஆராய்ச்சிக்கு முன்மாதிரியாக அமையும்.
PO – 3	ஆய்வியல் நெறிமுறைகளை அறிந்துகொள்ள முடியும்.
PO – 4	ஆய்வியல் கோட்பாடுகளை அறிதல்.
PO – 5	ஆய்வுத் தகவல்களைத் திரட்டும் முறையினை அறிதல்.

PSO NO	Programme Specific Outcomes
PSO – 1	சிறந்த ஆராய்ச்சியாளராக உருவாக வழிவகுத்தல்.
PSO – 2	மேலைநாட்டு ஆராய்ச்சி முறையை ஒப்பிட்டு அறிய முடியும்.
PSO – 3	தமிழ் இலக்கிய ஆராய்ச்சி நெறிமுறைகளை முழுமையாக அறிய முடியும்.
PSO – 4	ஆராய்ச்சிப் பணியில் சிறந்து விளங்குதல்.
PSO – 5	மாணவர்களுக்கு சிறந்த நெறியாளராக அமைதல்.

CO NO	Course Outcomes ஆய்வியல் நெறிமுறைகள் - P9TA1
CO – 1	ஆராய்ச்சி மாணவர்கள் ஆய்வியல் நெறிமுறைகளையும், அணுகுமுறைகளையும் தெரிந்து கொள்ள முடியும்.
CO – 2	ஆய்வு பற்றிய விளக்கங்களை அறிய இயலும்.
CO – 3	ஆய்வேட்டின் வடிவமைப்பை புரிந்து கொள்ளுதல்.
CO – 4	கள ஆய்வின் தேவைகளை உணர்தல்.
CO – 5	தற்கால ஆய்வுப் போக்குகளை அறிந்து கொள்ளுதல்.

CO NO	Course Outcomes இலக்கியத் திறனாய்வியல் - சில அணுகுமுறைகள் - P9TA5
CO – 1	இலக்கியத் திறனாய்வியலை மாணவர்களுக்கு எடுத்துரைத்தல்.
CO – 2	இலக்கியப் படைப்பாளிகளின் ஆளுமையை விளக்குதல்.
CO – 3	இலக்கியத்தின் பயன்களைத் தெரிந்து கொள்ளுதல்.
CO – 4	தொல்காப்பியரின் இலக்கியக் கொள்கைகளை விவரித்தல்.
CO – 5	உரையாசிரியர்களின் திறனாய்வுப் போக்குகளை அறிதல்.

CO NO	Course Outcomes புதுமைப்பித்தன் படைப்புகள் - Q9TA6
CO – 1	புதுமைப்பித்தன் படைப்புகளை அறிந்து கொள்ள முடியும்.
CO – 2	புதுமைப்பித்தன் படைப்புகளில் உள்ள கதை நுட்பங்களை விளங்கிக் கொள்ள முடியும்.
CO – 3	புதுமைப்பித்தன் கதைகளை ஆராய்தல்.
CO – 4	புதுமைப்பித்தன் சிறுகதைகளின் வழி சமூகச் சிந்தனைகளை அறிய முடியும்.
CO – 5	புதுமைப்பித்தனின் கட்டுரைகளை தற்கால நிகழ்வுடன் பொருத்தி ஆராய்தல்.

**DEPARTMENT OF ENGLISH (AIDED)**

**PART II ENGLISH - B.A. / B.Sc. / B.Com.**

PSO NO	Programme Specific Outcomes
PSO – 1	The specific outcome of the syllabus is to make students able to read, write, speak English fluently and paves way to pursue higher education. The syllabus carries both literature and language.
PSO – 2	To inculcate the values of literature, Prose, Poetry, Short Stories, One-act Plays, Abridged novels and Selected scenes from plays have been prescribed.
PSO – 3	Language skills are imparted and trained through drill practices in Grammar, Vocabulary and Composition exercises.
PSO – 4	Prescribing ‘Abridged Novels’ is to read the crux of the English classics of British, American and Indian novels.
PSO – 5	‘Selected Scenes from Drama’ renders both pleasure of reading and conversation skills.

CO NO	Course Outcomes PART II ENGLISH – (P2EN8)
CO – 1	To analyze different cultural practices and its application at global level and to make the students realize how perseverance takes them to a supreme level
CO – 2	To express how women reached heights from the upper hands of male counterparts
CO – 3	To enjoy nature and understand eco-aesthetics and thereby promote a sense of urge to preserve natural resources
CO – 4	To impart positivity in the young minds so as not to be deterred by shortcomings and to learn myths and recognize the value of traditional practices
CO – 5	To know about the types of nouns and verbs and to improve their grammar knowledge with many exercises
CO – 6	To develop their lexical knowledge through synonyms and antonyms
CO – 7	To educate students the modality of how to greet, request, inform and instruct and to recognize types of letters, its elements and its application to compose personal and business letters

CO NO	Course Outcomes PART II ENGLISH – I (Q2EN9)
CO – 1	To bring in the nostalgic memories of the author and his days in University along with his view on examination pattern
CO – 2	To compare and contrast ancient days and present scientific age and to make enthusiastic reading of thriller stories
CO – 3	To know the hurdles of the Magi face when they travel to witness the birth of Jesus and to familiarize the concept of leading meaningful life and effects of nature
CO – 4	To understand articles completely and where to use it in the sentence and to identify the singular and plural subjects and verbs in sentences
CO – 5	To prepare students face competitive exams and to educate difference between British and American English vocabulary and spelling
CO – 6	To enhance sentence construction by arranging words in correct grammatical order
CO – 7	To induce the habit of taking notes during the lecture

CO NO	Course Outcomes PART II ENGLISH – (R2EN10)
CO – 1	To acquire the meaningful messages of life from the short stories of famous Indian writers
CO – 2	To educate that every force has its opposite force in the form of Karma and to illustrate the mutual understanding of a father and a son
CO – 3	To instruct the strength and influence of great women characterization, to inspire with the rare examples of empowerment to achieve their passion and to enjoy humorous reading of the one act plays
CO – 4	To recognize the past, the present and the future tenses with verbs o recognize active or passive voice in real-life contexts
CO – 5	To improve students' verbal ability and to demonstrate the mastery of new vocabulary by adding affixes
CO – 6	To impart writing hints into passages makes students develop imaginative and writing skills
CO – 7	To enlighten the students in reading skill and able to summarize the important crux

CO NO	Course Outcomes PART II ENGLISH – (S2EN11)
CO – 1	To celebrate the writings of women writers and their proactive message for the young generation
CO – 2	To inculcate the habit of self-identification and to instill the need for social responsibility for uplifting the needy section of the society
CO – 3	To understand the theme as you sow, so you reap and the results of conspiracy and to perceive that the women are not fragile and appreciate their inborn capability to overcome the hurdles
CO – 4	To encourage them to face government exams and other bank exams and to practice for IELTS and TOEFL
CO – 5	To understand and recognize the meaning of the idioms and phrases and use them in sentences and to enable the students identify words that sound same but differ in meaning
CO – 6	To familiarize conversational practice using situational exercises
CO – 7	To impart writing dialogue skills on varied situations makes students develop imaginative and writing skills and to instill the descriptive writing skills



**DEPARTMENT OF MATHEMATICS (AIDED)**  
**B.Sc MATHEMATICS - AUMA**

PO NO	B.SC MATHEMATICS Programme Outcomes
PO – 1	To acquire knowledge in various aspect of mathematics.
PO – 2	To compute the algebraic, geometric and statistical quantities using suitable tools.
PO – 3	To comprehend the mathematical tools from basic axioms.
PO – 4	To realize the mathematical applications in other fields.
PO – 5	To attain analytic thinking.

PSO NO	B.SC MATHEMATICS Programme Specific Outcomes
PSO – 1	Inculcate the proficiency of writing proofs in pure mathematics papers through assignments.
PSO – 2	To acquire knowledge in analysis which include numbers, sets, functions and convergences.
PSO – 3	Motivate the students in order to acquire knowledge in aptitude examinations.  Nurture the skill of understanding and explaining the theorems in right way through seminars.
PSO – 4	Nurture the skill of understanding and explaining the theorems in right way through seminars.
PSO – 5	Inculcate the logical thinking and quantitative aptitude

CO NO	Course Outcomes ANALYTICAL GEOMETRY – P3CMA5
CO – 1	To attain knowledge about the angles and planes in two dimensional.
CO – 2	It is helpful to calculate the shortest distance between two lines.
CO – 3	To get vast knowledge about the sphere.
CO – 4	To discuss deeply about the sphere.
CO – 5	To demonstrate an understanding of the Green's theorem and Stroke's theorem and also to know about

the detailed study of vector integration.

CO NO	Course Outcomes CALCULUS AND TRIGNOMETRY – P3CMA4
CO – 1	Describe the concepts of curvature, evolutes and envelopes.
CO – 2	Discriminate the multiple integrals and beta, gamma functions.
CO – 3	Gain Knowledge in the expansion of $\sin nx$ , $\cos nx$ and $\tan nx$ .
CO – 4	Explain the concept of hyperbolic function and logarithm of a complex number.
CO – 5	Understand the ideas of fourier series and trigonometric series.

CO NO	Course Outcomes CLASSICAL ALGEBRA – Q3CMA7
CO – 1	Acquire knowledge about sequence and the concept of algebra of limits.
CO – 2	Learn about the different kinds of series.
CO – 3	Solve the problems using root test and ratio test.
CO – 4	Develop the skills for solving the reciprocal equations.
CO – 5	Gain knowledge about concept of diminishing and increasing the roots.

CO NO	Course Outcomes DIFFERENTIAL EQUATIONS – Q3CMA6
CO – 1	Understand the methods in solving the linear differential equations with constant coefficient.
CO – 2	Understand the methods in solving the linear differential equations with variable coefficient. Know about the method of solving differential equation using variation of parameters.
CO – 3	To able solve the first order and first degree order differential equations. Solve simultaneous linear equations with constant coefficient and total differential equations.
CO – 4	Solve the first order partial differential equations for some standard types.
CO – 5	Understand the concept of Laplace transform and its application in solving differential equations. Use inverse Laplace transform to return formation funs.

CO NO	Course Outcomes MODERN ALGEBRA – R3CMA6
CO – 1	To clarify Mathematical Principles of general algebraic structure of various sets (such as real numbers, complex numbers etc).
CO – 2	To express a central role of cosets in Lagrange's theorem.
CO – 3	To compare the properties of isomorphic groups.
CO – 4	To acquire knowledge about algebraic structure of ring.
CO – 5	To analyze the properties of an integral domain.

CO NO	Course Outcomes QUANTITATIVE APTITUDE – R3EMA2
CO – 1	Understand the basic concept of quantitative ability.
CO – 2	Understand the basic concepts of logical reasoning skills.
CO – 3	Acquire satisfactory competency in use of verbal reasoning.
CO – 4	Solve campus placements aptitude papers covering quantitative ability, logical reasoning and verbal ability.
CO – 5	Compete in various competitive exams like, CAT, CMAT, GATE, GRE, UPSC etc

CO NO	Course Outcomes ALLIED MATHEMATICS I – R3AMA3
CO – 1	Gain knowledge about the concept of binomial and exponential series.
CO – 2	Determine the reciprocal equation and transformation of equation.
CO – 3	Describe the concept of radius of curvature and center of curvature.
CO – 4	Discriminate the integral calculus and reduction formula.
CO – 5	Understand the ideas of Demovier's theorem and hyperbolic function

CO NO	Course Outcomes MATHEMATICS FOR COMPETATIVE EXAMS I – R4NMA1 (NME)
CO – 1	Learn about HCF, LCM, Square roots and Cube roots and problems on numbers.
CO – 2	To able to solve problems on ages, percentages, profit and loss, partnership.

CO – 3	To solve the problems on chain rule, simple and compound interest.
CO – 4	Understanding series completion and coding decoding, Blood relations problems.
CO – 5	Compete puzzle test, Direction sense test and Logical venn diagrams.

CO NO	Course Outcomes REAL ANALYSIS – S3CMA7
CO – 1	To outline the knowledge of fundamental properties in metric space.
CO – 2	To discuss deeply about the concepts of continuous functions between spaces.
CO – 3	To carry out the facts in a compactness and completeness of a metric space.
CO – 4	To construct the facts about the connected subsets of real numbers.
CO – 5	To demonstrate an understanding of the Baire’s category theorem and cantor intersection theorem.

CO NO	Course Outcomes PROGRAMMING IN C – S3EMA4
CO – 1	To develop programming skills using the fundamentals and basic of C language.
CO – 2	To study the advantages of user data type that provides flexibility for application development.
CO – 3	To enable to usage of arrays, structure and functions.
CO – 4	Apply pointer concepts in C.
CO – 5	Write program that perform operations using file.

CO NO	Course Outcomes LAB. IN PROGRAMMING IN C – S3EMAL4
CO – 1	Write the C code for a given algorithm
CO – 2	Write a program to print different data types in C of their ranges.
CO – 3	Knows concepts in problem solving.
CO – 4	To do programming in C language.
CO – 5	To write diversified solutions using C languages.

CO NO	Course Outcomes MS OFFICE –
CO – 1	Ability to navigate the word processor to create word documents for office use.
CO – 2	Understanding the basic concepts of find and replace, tool base, Header& Footer.
CO – 3	Understanding the basic machines and navigation of an Excel spread sheet and signing a work sheet for the organization purpose.
CO – 4	Apply the knowledge of mathematical functions and make the calculation easier for enormous data.
CO – 5	Master the basic concepts and appreciate the application of data base system.

CO NO	Course Outcomes MS OFFICE PRATICALS –
CO – 1	To have clear understanding about design a document using MS. Word.
CO – 2	To create different types of chart for sum data by using MS. Excel.
CO – 3	To perform mathematical function by using MS. Excel.
CO – 4	Learn to create the document into slide-show by using MS. PowerPoint.
CO – 5	To have clear understanding about Executing Queries by using MS. Access.

CO NO	Course Outcomes ALLIED MATHEMATICS II – S3AMA4
CO – 1	Used to compare and contrast the vector differentiation and their properties.
CO – 2	To get the knowledge about the vector integration through the simple applications of Gauss, Green and Stroke's theorem.
CO – 3	To attain the details of vector differentiation and also the integrating factors.
CO – 4	To know the methods of finding complementary functions and to find the second order differential equations with RHS in the trigonometric form.
CO – 5	To acquire Laplace Transform, partial differential equations, Lagrange's equation.

CO NO	Course Outcomes MATHEMATICS FOR COMPETATIVE EXAM II– S4NMA2
CO – 1	know about time and work, time and distance and Boats and streams.

CO – 2	Acquire knowledge Alligation of mixture and race games of skill.
CO – 3	Understand the concept of permutation and combinations, probability and heights and distance.
CO – 4	Gain knowledge about Mathematical operations, Arithmetical reasoning.
CO – 5	Learn to solve the problems logic type I and type II.

CO NO	Course Outcomes ASTRONOMY – S3SMA2 (SSP)
CO – 1	To learn about celestial sphere.
CO – 2	To know about the Earth.
CO – 3	The knowledge about calendar.
CO – 4	To study about the Moon.
CO – 5	Analysis the Eclipses.

CO NO	Course Outcomes OPERATION RESEARCH – T3CMA13
CO – 1	Analyze and solve linear programming models of real life situations.
CO – 2	Know about the relationship between the primal and dual problems.
CO – 3	Learn about the applications to transportation and assignment problems.
CO – 4	Students will able to find inventory decisions costs using deterministic inventory problems with no shortage with shortages.
CO – 5	Acquire knowledge about the usage of game theory and simulation for solving real life problems.

CO NO	Course Outcomes COMPLEX ANALYSIS – T3CMA14
CO – 1	Compute sums, products, quotients, conjugate, modulus, argument of complex numbers, and write complex numbers in polar form.
CO – 2	Understand the complex functions, limits and continuity, differentiability, Cauchy – Riemann equations and analyticity.
CO – 3	Introduce elementary transformation and bilinear transformations, define cross ratio and find

	fixed points of bilinear transformations.
CO – 4	Understand the theory and techniques of integration, use Cauchy's integral theorem and identify the isolated singularity such as removable, poles, or essential.
CO – 5	Find residues and evaluate complex integrals using the residue theorem, understand uses of improper integrals.

CO NO	Course Outcomes STATISTICS I – T3CMA15
CO – 1	Understanding the basic concepts of measures of central tendency and dispersion.
CO – 2	Students will be able to define moments, skewness and kurtosis and to find a straight line.
CO – 3	Acquire knowledge regarding correlation and linear regression.
CO – 4	To learn about the concepts of interpolation and theory of attributes.
CO – 5	Students will possess the ability to formulate solutions, analyze use of index numbers.

CO NO	Course Outcomes MECHANICS – T3CMA12
CO – 1	Understanding the concept of D'Alembert's principle and Lagrange's equation.
CO – 2	To demonstrate knowledge and understanding of the fundamental concept in Hamilton's principle.
CO – 3	Acquire knowledge on the conservation theorems and symmetry properties.
CO – 4	Realize importance of impact and impulsive force of a particle on a surface.
CO – 5	The students will learn the phenomenon of collision and idea about center of mass.

CO NO	Course Outcomes OBJECT ORIENTED PROGRAMMING IN C++ – T3EMA7
CO – 1	Implement object oriented programming concept using basic syntaxes of control structures, strings and function for developing skills of logic building activity.
CO – 2	Identify classes, objects, members of a class and the relationships among them needed for finding the solution to specific problem.
CO – 3	Demonstrates how to achieve reusability using inheritance, virtual base classes and describes faster application development can achieved.
CO – 4	Demonstrate understanding and use of different exception handling mechanics.
CO – 5	To understand the importance of classes and objects along with constructors, arrays and functions.

CO NO	Course Outcomes LAB –OBJECT ORIENTED PROGRAMME IN C++ – T3EMAL4
CO – 1	Understand the difference between top-down and bottom – up approach.
CO – 2	Apply the concepts of object-orientation programming in constructor and destructor.
CO – 3	Understand how to apply the major Object-oriented concepts to implement inheritance.
CO – 4	Read and write data from files in C++ programs.
CO – 5	Write a program to operator overloading.

CO NO	Course Outcomes RELATIONAL DATA BASE MANAGEMENT SYSTEM
CO – 1	Understanding about traditional approach to information processing. Use of database DBMS, data manipulation language.
CO – 2	Compete the Database models, hierarchical network DBMS environment.
CO – 3	To demonstrate to build a database, creating opening, database entering data, EXACT searching.
CO – 4	Train the students to editing and modifying database, creating and printing formatted, multiple data file.
CO – 5	Analyse file maintenance performance memory variable command file creation.

CO NO	Course Outcomes RELATIONAL DATA BASE MANGEMENT SYSTEM PRATICAL
CO – 1	Demonstrate an understanding of the elementary feature of RDBMS.



CO – 2	Design conceptual models of a data base using ER modelling for real life application.
CO – 3	Able to develop structured query language.
CO – 4	Design efficient PL/SQL programs to access database.
CO – 5	Design and implement a database scheme for a given problem domain.

CO NO	Course Outcomes ALLIED MATHEMATICS III – T3AMA4
CO – 1	To know about the analytic function and Cauchy Riemann equation and also its application.
CO – 2	Useful to compare and contrast of the Rank Correlation co-efficient with statistics and also the Newton methods.
CO – 3	To know detailed study of attributes and Index numbers.
CO – 4	To attain more knowledge about matrices, solution of equations, and also Eigen values and Eigen vectors.
CO – 5	To demonstrate the understanding of the lagrange's theorem and to study deeply about the groups and punctuation groups.

CO NO	Course Outcomes DISCRETE MATHIMATICS – T3SMA2 (SSP)
CO – 1	To enable the students to learn about the propositions logical operations and constructions of Truth Table and Equivalence and Implications and NAND and NOR.
CO – 2	Analysis the method of functionally complete set and Normal forms and statement calculus and Quantifiers and rule CP.
CO – 3	Compute the Mathematical Induction and Recursion and Iteration and Sequences and Integers.
CO – 4	Understanding the Recurrences relations and solving linear homogeneous and non-homogeneous recurrence relation using generating function.
CO – 5	Demonstrate the Hasse Diagram of Partially ordered sets and lattices.

CO NO	Course Outcomes LINEAR PROGRAMMING PROBLEM – CRMA1
CO – 1	Define basic feasible solutions, slack and surplus variable.
CO – 2	Explain simplex big method and two phase method.

CO – 3	Prove dual of the dual in primal interpret dual simplex method.
CO – 4	Illustrate assignment problem and travelling salesman problem.
CO – 5	Define two person sum games maximin minimax principle saddle points.

CO NO	Course Outcomes LINEAR ALGEBRA – U3CMA16
CO – 1	Recognize the concepts of the terms span, linear independence, basis, dimensions and understand the concept of Linear transformations and matrices of linear transformations.
CO – 2	Introduce the new terms Basis and Dimensions, define Rank and Nullity
CO – 3	Introduce the concepts of Inner Product Spaces, define Orthogonality and Orthogonal Complements.
CO – 4	Acquire the knowledge of a matrix, basic operations, rank and determinant of a matrix, solve a system of Linear equations and distinguish between consistent and inconsistent system of equations.
CO – 5	Compute with the characteristic polynomial and equations of a given square matrix familiarize characteristic roots and characteristic vectors.

CO NO	Course Outcomes ORACLE – U3CMA17
CO – 1	Explain the features of database management systems and relational database.
CO – 2	To introduce the concepts of basic SQL as a universal data base language.
CO – 3	Analyze the existing design of a data base scheme and apply concepts of normalization to design an optimal database.
CO – 4	Retrieve any type of information from a data base by formulation complex queries in SQL.
CO – 5	Create and populate a RDBMS, using SQL.

CO NO	Course Outcomes LAB IN ORACLE – U3CMAL1
CO – 1	Design and implement a data base scheme for a given problem.
CO – 2	Populate and query a data base using SQL commands.
CO – 3	Create RDBMS with constraints and keys using SQL.
CO – 4	Program in PL/SQL including on (Data manipulation language)
CO – 5	Program in PL/SQL including DDL(Data Definition language).

CO NO	Course Outcomes JAVA PROGRAMMING –
CO – 1	This course aim to train students for Java resolution, Java applets, rich object Environment, Oops, Object summary, Java genesis, Hello world, variables.
CO – 2	Analyse data types, simple types, Arrays Exception Looping.
CO – 3	To know about classes, string handling, construction, special string syntax, string buffer, string attached.
CO – 4	Explore about exception handling, Threads and single, Thread event loop, java thread model Thread runnable, File, Input stream. Understanding about streaming I/O, together URL connection.
CO – 5	Demonstrate about applets, Abstract window toolkit, Layout, Imaging.

CO NO	Course Outcomes JAVA LAB –
CO – 1	Students will obtain knowledge of the structure and model of the Java programming language.
CO – 2	How to use the Java programming language for various programming technologies.
CO – 3	Develop software in the Java programming language.
CO – 4	Choose an engineering approach to solving problem, starting from the required knowledge of programming.
CO – 5	Use the certain technologies by implementing them in the Java programming language to solve the given problem.

CO NO	Course Outcomes GRAPH THEORY – U3CMA18
CO – 1	Students are able to understand the graph as models. Students gain the knowledge sub graphs, paths, cycles; spanning trees.
CO – 2	Explanation about Direct graph, Types of directed graph. Students gain knowledge about Euler

	diagraph, fundamental circuits in diagraph.
CO – 3	Students are able to understand the concepts of enumeration types of enumeration. Theorems using for enumeration.
CO – 4	Students gain the knowledge of contact network, analysis and synthesis of contact network.
CO – 5	Students are able to apply the concept of Directed graph in networking problem of operation Research

CO NO	Course Outcomes STATISTICS II – U3CMA19
CO – 1	This course will enable the students to understand distribution in the study of the joint behaviour of two random variables.
CO – 2	Understand the basic concepts of probability and to know the various discrete and continuous distributions.
CO – 3	Students will be able to solve the problems of large and small samples.
CO – 4	Acquire knowledge about test of hypothesis and associated concepts.
CO – 5	To concepts the analysis of variance, one way and two way classifications, latin square design.

CO NO	Course Outcomes NUMERICAL ANALYSIS – U3CMA20
CO – 1	It is used for solving a system of equations.
CO – 2	It has application in all branches of engineering.
CO – 3	To know how to find the roots of transcendental equations.
CO – 4	To learn how to interpolate the giver set of values.
CO – 5	To learn numerical solution of differential equations.

CO NO	Course Outcomes ALLIED MATHEMATICS IV – U3AMA6
CO – 1	Explain the concept of LPP and some classes of LPP.
CO – 2	Obtain the primal and dual of LPP.

CO – 3	Examine the balanced and unbalanced assignment problem.
CO – 4	Determine the feasible solution, IBFS, Optimal solution of transportation problem.
CO – 5	Understand some basic concepts of game theory with saddle point and without saddle point.

CO NO	Course Outcomes INTEGRAL TRANSFORMS – U3SMA2 (SSP)
CO – 1	Make the students familiar with Integral Transforms in fourier transforms and alternative form of fourier complex integral formula and Laplace transform.
CO – 2	Provide the students with the basic knowledge of finite fourier transforms and properties of fourier transforms.
CO – 3	Acquire the knowledge of Laplace transform of Derivatives and integrals and final value theorem.
CO – 4	Analyse the problems of convolution and solution of differential and integral equations.
CO – 5	Understand the students to properties of Z-transforms and Z-transforms of some basic functions.

CO NO	Course Outcomes RESOURCE MANAGEMENT TECHNIQUE – CRMA2
CO – 1	Define nature and feature of OR analyze and solve linear programming models of real life situations.
CO – 2	Provide graphical solutions of LPP with two variables, and illustrate the concept of convex set and extreme points.
CO – 3	Understand the theory of the Simplex method.
CO – 4	Know about the relationships between the primal and dual problems, and to understand sensitivity analysis.
CO – 5	Learn about the applications to transportation, assignment and two person zero sum game problems.

**DEPARTMENT OF PHYSICS**  
**B.Sc PHYSICS - AUPH**

PSO NO	Program Specific Outcomes
PSO-1	Understand the basic concepts of physics
PSO-2	Apply the various concepts to solve the problems in physical science

CO NO	Course Outcomes GENERAL PHYSICS – P3CPY4
CO-1	Understand the principles of motion of bodies and sound waves.
CO-2	Acquire knowledge about mechanics, properties of matter and gravitation.
CO-3	Appreciate the applications of conservation laws.
CO-4	Explore the fundamentals of elasticity and torsion effects.
CO-5	Analyze the universal behavior of wave motion and Doppler effect.
PO-3	Relate key concepts and scientific principles to various scientific phenomenon and their applications in day to day life.
PO-4	Cultivate unparalleled comprehension of fundamental concepts relevant to basic science leading to an individual progress and career advancement at the national levels.
PO-5	To communicate effectively their views and ideas
PSO-3	Learn to design an experiment using appropriate components and cultivate the research attitude by doing project work
PSO-4	Provide knowledge about material properties and its application for developing technology
PSO-5	Acquire knowledge about academic excellence for higher studies and research.

CO NO	Course Outcomes THERMAL PHYSICS – P3CPY5
CO-1	Analyze the different types of calorimeter and specific heats.
CO-2	Demonstrate thermal conductivity and concept of specific heat capacity through practical experiments.
CO-3	Illustrate the importance of transport phenomena and Joule –Kelvin effects.
CO-4	Identify the laws of thermodynamics and analyze its application to heat engines.
CO-5	State and apply the concepts of entropy and the use of temperature scales.
Co-6	Apply Maxwell's thermodynamic equations to comprehend phase transitions.

CO NO	Course Outcomes FUNDAMENTAL PHYSICS- P3APY3
CO-1	Understand the effect of gravitation on objects .
CO-2	Gain the knowledge about the principle of rocket.
CO-3	Understand the basics of properties of matter, young's modulus and rigidity modulus.
CO-4	Evaluated for different shapes of practical relevance of matter.
CO-5	Study the general equation of wave motion in general and TM waves in stretched strings and longitudinal waves.
CO-6	Recall the properties and uses of ultrasonic waves.

CO NO	Course Outcomes OPTICS AND SPECTROSCOPY- Q3CPY6
CO-1	Illustrate the concept of dispersion, aberration in lenses.
CO-2	Realise the concept of interference in optics and to apply in designing optical elements useful in day to day life.
CO-3	Analyze and apply the knowledge of diffraction in the laboratory experiments.
CO-4	Explore the concept of polarization and Nickel prism and to study the laws of optical activity and specific rotation.
CO-5	Demonstrate the laser principles, laser behavior, different types of lasers and its applications.

CO NO	Course Outcourse MAJOR CORE PAPER- ELECTROMAGNETISM- Q3CPY7
CO-1	Able to understand the concept of Biot Savart Law, Lorentz force, torque, moving coil ballistic galvanometer and absolute capacity of capacitor
CO-2	Recall the Faraday's law, Len's law and Rayleigh's method
CO-3	To gain the knowledge properties of dia, para and ferro magnetic materials.
CO-4	To understand theory and experimental to find temperature coefficient and specific resistance.
CO-5	Learn the LCR series and parallel circuits concepts.

CO NO	Course Outcomes HEAT AND THERMODYNAMICS- Q3APY3
CO-1	Demonstrate thermal conductivity and concept of specific heat capacity.
CO-2	Understand the concept of thermodynamics and their laws.
CO-3	Students understand the physical phenomena associated with convection Newton's law of cooling.
CO-4	Study the Stefan's Boltzmann law of radiation and emissivity relation.
CO-5	Describe the concept of entropy calculate heat and other important thermodynamics properties for ideal gas.

CO NO	Course Outcomes PRACTICAL –I – Q3CPYL1
CO-1	Demonstrate the use of potentiometer for the calibration of electrical meters.

CO-2	Apply the concepts of moduli of elasticity in a series of experiments
CO-3	Illustrate the underlying concepts of fluid dynamics and mechanics of rigid bodies and compare the results to the standard values.
CO-4	Demonstrate the laws of vibration through various experimental procedure.
CO-5	Apply the phenomenon of dispersion and the concept of refractive index with the use of suitable optical setup.

CO NO	Course Outcomes ALLIED PRACTICAL I –Q3APYL1
CO-1	Perform experiments on any material to identify the strength the given objects.
CO-2	Deal with liquids Newton's law of cooling.
CO-3	Calculate the value of g in compound pendulum.
CO-4	Design the simple circuits and deal with potentiometer voltmeter, ammeter.
CO-5	Perform the experiments on meldon's string to calculate the values of different modes.

CO NO	Course Outcomes ENERGY PHYSICS –Q3SPY2 (SSP)
CO-1	Acquire knowledge on various energy sources.
CO-2	Understand the concept of solar energy.
CO-3	Study the photovoltaic generation basis and their merits and demerits of solar energy.
CO-4	Demonstrate industrial transportation and agricultural sectors.
CO-5	Learn the energy storage for the developing countries.

CO NO	Course Outcomes ATOMIC PHYSICS AND RELATIVITY- R3CPY6
CO-1	Discuss the concept of relativity and behavior of objects in space and time
CO-2	Understand the concept of electrical conductivity and thermal conductivity
CO-3	Analyze the structure of atoms and coupling scheme
CO-4	Utilize the application of vector atom model.
CO-5	Evaluate the atomic behavior in external applied electric and magnetic field
CO-6	Able to know the concepts of X-ray production and the experiments to find the X-ray spectra.

CO NO	Course Outcomes ELECTRICITY AND BASIC ELECTRONICS- R3APY5
CO-1	Understand the basic concepts of electrostatics to electric field.
CO-2	Understand electric and magnetic fields and apply the principles of coulomb's law and Gauss's law to electric fields in various coordinate systems.



CO-3	Compare the LCR series and parallel circuits.
CO-4	Recall the types of diodes and determine the characteristics of op-amp.
CO-5	Apply the Boolean algebra to logic circuits

CO NO	Course Outcomes BIO PHYSICS- R3SPY3 (SSP)
CO-1	Study the structure and function of macro molecules and their types.
CO-2	Understand the principles of different microscopes.
CO-3	Acquire the knowledge on techniques of Raman-Ray diffraction, NMR, ESR spectroscopy.
CO-4	Recall the principles of dialysis and their types.
CO-5	Demonstrate the hydrogen ion concentration and Ph scale.

CO NO	Course Outcomes PHYSICS OF SPORTS-R4NPY1 (NME)
CO-1	Analyze the energy for internal body process and their growth.
CO-2	Explain the force and their some examples
CO-3	Demonstrate the conservation of laws (i.e) momentum and elasticity.
CO-4	State and apply the concepts of Newton's law of impact
CO-5	Discuss the angular displacement, angular velocity, acceleration, angular momentum.
CO-6	Illustrate the centripetal and centrifugal force
CO-7	Acquire the knowledge in applications of projectile motion.

CO NO	Course Outcomes NUCLEAR PHYSICS- S3CPY7
CO-1	Analyze the structure of nucleus from various models.
CO-2	Learn about the detectors of nuclear radiation.
CO-3	Assess interaction of various types of radiation with matter evaluate their occurrence in their daily life
CO-4	Understand the concept of nuclear fission and fusion.
CO-5	Acquire knowledge of universe and the elementary particles.

CO NO	Course Outcomes MODERN PHYSICS AND OPTICS- S3APY6
CO-1	Understand the laws of photo electricity and Einstein's equation in quantum theory.
CO-2	Analyze the postulates of special theory of relativity and mass-energy relatin.
CO-3	Demonstrate the concepts of geometrical optics.
CO-4	Acquire knowledge about interference and diffraction.
CO-5	Appreciate the fundamentals of spectroscopy.

CO NO	Course Outcomes
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MAJOR PRACTICAL II- S3CPYL2	
CO-1	Analyze the effects of refractive index of a medium using optical instruments.
CO-2	Predict the curvature of a transparent medium.
CO-3	Measure the thickness of thin material using optical means.
CO-4	Determine the wavelength of mercury spectrum.
CO-5	Analyze frequency response of LCR circuits.
CO-6	Understand the characteristics and applications of operational amplifier.
CO-7	Construct regulated power supply using IC
CO-8	Verify the truth tables of basic logic gates and universal gates.
CO-9	Design circuits using universal gates such as NAND and NOR.

CO NO	Course Outcomes ALLIED PRACTICAL II –S3APYL2
CO-1	Analyze the effects of refractive index of medium using optical instruments.
CO-2	Predict the curvature of a transparent medium.
CO-3	Measure the thickness of thin material using optical means.
CO-4	Determine the wavelength of mercury spectrum.
CO-5	Analyze frequency response of LCR circuits.
CO-6	Understand the characteristics and applications of operational amplifier.
CO-7	Construct regulated power supply using IC.
CO-8	CO :8 Verify the truth tables of basic logic gates and universal gates.
CO-9	Design circuits using universal gates such as NAND and NOR.

CO NO	Course Outcomes MS OFFICE- (SSP)
CO-1	Illustrate the MS office word, excel and power point.
CO-2	Practice the word window, mouse operation and different types of short cut keys.
CO-3	Demonstrate MS word menus like edit menu, file menu
CO-4	Understand the excel basics and do's and don'ts of MS excel.
CO-5	Apply skills and concepts of MS office, PowerPoint, word, excel in the work place.

CO NO	Course Outcomes HOME APPLIANCES-S4NPY2
CO-1	Demonstrate the parts of computer.
CO-2	Illustrate the working of computer keyboard and mouse.
CO-3	Analyze the types of computers (ie) super, neuro, pocket computers.
CO-4	Explain the working of telephone and electronic mail.
CO-5	Discuss the digital recording, laser and holography.
CO-6	Demonstrate the micro appliances that is radio wave, refrigerator, coffee maker, hair dryer, microwave oven and lamps.

CO NO	Course Outcomes ADVANCED MECHANICS -T3CPY12
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CO-1	Understand the motion of a mechanical system using Lagrange-Hamiltonian formalism.
CO-2	Acquiring knowledge of the quantum mechanics postulates.
CO-3	Recall the wave mechanical atom model.
CO-4	Analyze the basic postulates of wave mechanics.
CO-5	Discuss the concepts of microstate and macro state of a system.
CO-6	Compare the Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac distributions.

CO NO	Course Outcomes ANALOG ELECTRONICS - T3CPY13
CO-1	To understanding the basic of semiconductors and its characteristics.
CO-2	To learn the concepts of transistor symbols, action and transistor Connections.
CO-3	To study the single stage transistor amplifiers and DC AC equivalent circuits\
CO-4	To gain the knowledge of multistage transistor amplifier and importance of coupling.
CO-5	To determine the principles feed backs in amplifiers and study the different types oscillators.

CO NO	Course Outcomes ENVIRONMENTAL PHYSIC-T3SPY5 (SSP)
CO-1	Learn the forces, action and reaction, friction and gravity.
CO-2	Able to know the earth climate and atmosphere.
CO-3	Suggests ways for hygiene, health, managing waste, disaster (or) emergency situations.
CO-4	Create drawings, designs and models about environment physics.
CO-5	Able to understand the renewable energy , source and biomass energy.

CO NO	Course Outcomes PROGRAMMING IN C -T3EPY3
CO-1	Define the fundamentals of “C” program.
CO-2	Categorize the operators and expressions.
CO-3	Demonstrate the practical concepts of functions and statements.
CO-4	Explore the user defined function and arrays.
CO-5	Acquire the knowledge of C programming and their functions and practical programmes.
CO-6	Discuss the applications and their uses of C programmes.

CO NO	Course Outcomes NANO SCIENCE-T3EPY2
CO-1	Analyze the electron , optical, scanning probe microscopes.
CO-2	Formulate appropriate tools for measurements of relevant physical properties.
CO-3	Discuss and evaluate state of the art characterization methods for Nano materials

CO-4	Acquire the knowledge in applications of nanotechnology in various fields
CO-5	Illustrate the practical purpose of functionalized metal nanoparticles
CO-6	Demonstrate the method of preparation and their characterization.

CO NO	Course Outcomes DIGITAL ELECTRONICS- U3CPY14
CO-1	Understand binary codes and Boolean algebra.
CO-2	Understand the concepts of different logic circuits and its design.
CO-3	Analyse the laws of Boolean algebra and techniques of k-map and its truth table.
CO-4	Demonstrate the various digital electronic circuits like flip flops, shift registers and counters.
CO-5	Understand the structure of various number systems.

CO NO	Course Outcomes CONDENSED MATTER PHYSICS - U3CPY13
CO-1	Understand the basic concepts of crystallography.
CO-2	Analyze the experimental methods in X-rays diffraction.
CO-3	Discuss the concepts of primary and secondary bonds.
CO-4	Acquiring knowledge of crystal imperfection and Band theory of solids.
CO-5	Learn about the types of superconductivity and their applications.

CO NO	Course Outcomes MAJOR PRACTICAL III –U3CPYL3
CO-1	Perform the analysis and design of various bridge circuits.
CO-2	Demonstrate the 8 bit addition and subtraction using 8085 instructions.
CO-3	Explore the phenomena of Hartman's interpolation formula and Cauchy's constant using optical experiments.
CO-4	Apply the concepts of "C" program.
CO-5	Analyze and design the circuits of high resistance by leakage and co-efficient of self induction.
CO-6	Comparison of mutual inductance and high resistance by leakage using B.G.

CO NO	Course Outcomes MAJOR PRACTICAL- IV - U3CPYL5
CO-1	Demonstrate the input and output characteristics of a transistor in common emitter configuration and common base configuration.
CO-2	Study and Design characteristics and application of diodes.
CO-3	Understand the basic concepts of gates using transistor.
CO-4	Design and verify the operations of astable and bistablec multivibrator using transistor.
CO-5	Compute the working of Colpitt's and Hartley oscillator
CO-6	Design and verify the operations of differentiator and integrator circuit using 741 Op-Amp.
CO-7	Determine the working of 555 timers.
CO-8	Design and verify the operations of half adder, full adder and flip flops.

CO NO	Course Outcomes MICROPROCESSOR- U3EPY7
CO-1	Pinpoint the concept of microprocessor and its history and its evolution with integration technology. Outline the classification of memory and computers.
CO-2	Understand and realize the types of input and output devices and differentiate Assembly and High level languages.
CO-3	Describe the general architecture and pin configuration of 8085.
CO-4	Identify the addressing mode of an instruction. Classify the instruction set of 8085 microprocessor and distinguish the use of different instructions and apply it in assembly language programming.
CO-5	Develop programming skills in assembly language. Realize the programmable interface devices and interfacing of it with 8085 microprocessor.

CO NO	Course Outcomes COMMUNICATION SYSTEM- U3EPY4
CO-1	Understand and identify the fundamental concepts and various components of communication system.
CO-2	Explore the concept of LASER. Analyze and find applications of Holography and fiber optics.
CO-3	Describe the mobile wireless networks.
CO-4	Explain the basics and every aspects of satellite communication.
CO-5	Use the different application of satellite communication.

CO NO	Course Outcomes ASTRO PHYSICS-U3EPY5
CO-1	Understand the features of objects in the solar system.
CO-2	Study the solar system based upon observational and physical constraints.
CO-3	Detail the cosmic rays, thermal history of universe and features of universe.
CO-4	Gain the knowledge of the rocket motion.
CO-5	Be able to formulate scientific problems in mathematical terms and apply analytical, numerical methods.

CO NO	Course Outcomes PROJECT-U3EPYP
CO-1	Learn the basics concepts of mobile communication and assembling and disassembling of various methods of mobile phone parts.
CO-2	Understand the various components on the PCB and testing of various
CO-3	Detailed study of various faults arising due to concept software
CO-4	To gain understanding of the basic and advanced trouble shooting concepts.
CO-5	By guidance to start and manage our own mobile repair.

### M.Sc PHYSICS – SPPH

PSO NO	Program Specific Outcomes
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PSO-1	Post graduates will develop the critical analysis and problem solving skills required in the application of principles of physics
PSO-2	Gain the knowledge in depth of fundamental theories in physical science.
PSO-3	Identify the appropriate resources through ICT enabled classrooms
PSO-4	Postgraduates will have strong capability in organizing and presenting the acquired knowledge coherently both in oral and written discourse
PSO-5	Develop communication skills in communicating physics and Postgraduates will successfully complete for current employment opportunities

CO NO	Course Outcomes MATHEMATICAL PHYSICS-I - P6CPY6
CO-1	Learn about gradient, divergence and curl in orthogonal curvilinear and their typical applications in physics.
CO-2	Learn about special type of matrices that are relevant in physics and then learn about tensors.
CO-3	Get introduced to special functions like Gamma function, Beta function, Dirac delta function, Bessel functions and their recurrence relation.
CO-4	Learn different ways of solving second order differential equations and familiarized with singular points and Frobenius method.
CO-5	Learn the fundamentals and applications of Fourier series, Fourier and Laplace transforms their inverse transforms etc.

CO NO	Course Outcomes CLASSICAL MECHANICS - P6CPY7
CO-1	Formulate the mechanics of system of particles at the advanced level and the exposure to Lagrangian equation.
CO-2	Explore the shape of the orbit in Kepler's problem from the inverse square law.
CO-3	Describe the significance of Hamiltonian and Canonical transformations.
CO-4	Theory of small oscillations in detail along with basis of free vibrations.
CO-5	The classical background of quantum mechanics and get familiarized with Hamiltonian Jacobi equation.

CO NO	Course Outcomes APPLIED ELECTRONICS- P6CPY8
CO-1	Understand the frequency spectrum of am wave , band techniques.
CO-2	Knowledge the various modulation techniques
CO-3	Study asynchronous counters , synchronous counter and digital clock
CO-4	Know the basic concepts of logic circuits and K map
CO-5	Understand the D/A and A/D conversions

CO NO	Course Outcomes PROGRAMMING IN C++ - P6EPY3
CO-1	Learn the concepts of data types, operators, statements, declaration of variables and how to write a simple c++ programme.
CO-2	Understanding of different types of control statements and functions
CO-3	An ability to learn the concepts of Arrays, functions, pointer declarations and functions, pointers and Arrays'
CO-4	To gain understanding of the structure, unions and bitwise concepts
CO-5	Gain conceptual understanding of inheritance and overloading

CO NO	Course Outcomes NUMERICAL METHODS- P6EPY2
CO-1	To learn concepts of solution of algebraic and transcendental equation.
CO-2	To gain understanding of the interpolation formulas
CO-3	Explain the numerical integration and differentiation
CO-4	To learn the Simpson's rule, Taylors series, Picard's methods of successive approximation, Euler's method and Runge Kutta Method
CO-5	Discuss the matrix operations, solution of linear systems iterative methods and solve the Eigen value problems
CO-6	An ability to understand the numerical solution of partial differential equations

CO NO	Course Outcomes MATHEMATICAL PHYSICS-II- Q6CPY8
CO-1	Know the method of contour integration to evaluate definite integrals of varying complexity.
CO-2	Have gained ability to apply group theory to physics problems, which understands of crystallography, particle physics, quantum mechanics and energy bands in solids.
CO-3	Be able to apply calculus of variations to diverse problems in physics including isoperimetric problems. Another interesting aspect is the use of Lagrangian multiplier in solving physics problems.
CO-4	To become familiar with the method of Green's function to solve linear differential equations with inhomogeneous term.
CO-5	To find solutions to integral equations using different methods.

CO NO	Course Outcomes THERMODYNAMICS AND STATISTICAL MECHANICS- Q6CPY10
CO-1	Realize the importance of thermo dynamical functions and applications of Maxwell's relation.
CO-2	Apply the law of thermodynamics to paramagnetic salt, surface films and chemical potentials.
CO-3	Grasp the basis of ensemble approach in statistical mechanics to a range of situations.
CO-4	Familiarize in depth about statistical distribution and have basic ideas. Bose Einstein and Fermi Dirac statistics and their applications.
CO-5	Demonstrate the Einstein and Debye's theory of specific heat.

CO NO	Course Outcomes
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ELECTROMAGNETIC THEORY - Q6CPY9	
CO-1	Identify the problems by application of poisson's and Laplace's equations.
CO-2	Learn about the Biot-savart law and to use it to calculate the magnetic field
CO-3	Apply the Maxwell equation to solve problems
CO-4	Acquire the knowledge of propagation of electromagnetic waves in different media
CO-5	Analyze the nature of electromagnetic wave propagation in guided medium which are used in microwave applications

Course Outcomes MAJOR PRACTICALS-I ELECTRONICS- Q6CPYL3	
CO-1	Understand the working of Op-amp as Hartley oscillator, digital to analog convertor, analog to digital convertor and by solving simultaneous equations.
CO-2	Summarize the characteristics of LED, LDR, photodiode and photo transistors.
CO-3	Compare the low pass, high pass and band pass filters.
CO-4	Design and perform transistor based circuits like Schmitt trigger, Hartley oscillator and Wien's bridge oscillator
CO-5	Simplify and summarize the given logical function using Karnaugh map technique.
CO-6	Study astable multivibrator using IC 555 and use the same as LED flasher.
CO-7	Study the behavior of unijunction transistor as relaxation oscillator
CO-8	Compare the working of multiplexer and demultiplexer.
CO-9	Perform simple circuits using 'digital works' software.

Course Outcomes MAJOR PRACTICALS-II GENERAL EXPERIMENTS- Q6CPYL2	
CO-1	Diagnose the Cauchy's constant of a given prism for different pairs of spectral color using spectrometer.
CO-2	Analyze the hyperbolic elliptical fringes could provide information about Young's modulus and Poisson's ratio.
CO-3	Construct the Maxwell's bridge circuit and measure the self inductance of the coil.
CO-4	Understand the concept of Owens's Bridge usually works on the principle of comparison.
CO-5	Determine the unknown capacitance value in Wien's bridge method.
CO-6	Analyze the refractive index of different liquids using hollow prism.
CO-7	Know to write the numerical integration program in C++ language.
CO-8	Analyze the refractive index of liquid using laser diffraction method.
CO-9	Construct the Anderson's bridge.

Course Outcomes BIO MEDICAL INSTRUMENTATION- Q6SPY3 (SSP)	
CO-1	Study the nature of cells and their structure.
CO-2	Understanding the techniques of medical and bio medical instrumentation.
CO-3	Gain of knowledge of heart-lung machine and kidney machine.
CO-4	Explain the radiation safely instrumentation.
CO-5	Illustrate the advanced laser instrumentation and bio materials.



CO NO	Course Outcomes INSTRUMENTATION- Q6EPY5
CO-1	Knowledge about applications of electronic measurements.
CO-2	Understand the working principles of different electronic instruments like DVM, DFM
CO-3	Learn the working principles of current to voltage converter electronic ammeter
CO-4	Able to know the cathode ray oscilloscope and its applications (LED , LCD).
CO-5	Recall the basics of logic circuits

CO NO	Course Outcomes MEDICAL PHYSICS- Q6EPY4
CO-1	Understand the normal structure and function of the body and its major organ system.
CO-2	Study the radiation and radio activity its properties and units of measure
CO-3	Knowledge the biological effects of radiation and safely rules
CO-4	Study the procedures associated with the clinical track
CO-5	Ability to retrieve, manage and utilize information for solving problems.

CO NO	Course Outcomes SOLID STATE PHYSICS-I - R6CPY11
CO-1	Explain the periodic arrangements of atoms, concepts of lattice.
CO-2	State and apply the concepts of Bragg's law and Laue equations
CO-3	Discuss the crystal binding and elastic constants
CO-4	Illustrate the vibrations of linear monatomic and diatomic chains.
CO-5	Discuss the covalent crystals, metallic crystals and hydrogen bonds.
CO-6	Demonstrate energy levels in one dimension
CO-7	Acquire the knowledge in semiconductor crystals and Fermi surfaces and metals.

CO NO	Course Outcomes QUANTUM MECHANICS-I - R6CPY13
CO-1	Identify and understand the kinds of experimental results which are incompatible with classical physics and which required the development of a quantum theory of matter and light.
CO-2	Relate the matrix formalism to use of basis status and solve simple problems in that formalism.
CO-3	Solve the Schrodinger equations obtain wave functions for some basic, physically important types of potential in one dimension
CO-4	Study physical systems like harmonic oscillator by solving Schrodinger's equation and investigate the spherical harmonics.
CO-5	Understand the role of uncertainty in quantum physics, and use the commutation relations of operators to determine whether or not two physical properties can be simultaneously measured.

CO NO	Course Outcomes
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NUCLEAR PHYSICS- R6CPY12	
CO-1	Know the general properties of nucleus.
CO-2	Understand the concept of alpha and beta , helicity and gamma radiation and selection rules.
CO-3	Would be able to apply various aspects of nuclear reactions in view of compound nuclear dynamics.
CO-4	Accounts for fission and fusion process of the reaction.
CO-5	May be to know about nuclear fission reactors.

CO NO	Course Outcomes INFORMATION TECHNOLOGY- R6SPY5 (SSP)
CO-1	Acquiring knowledge of classification of software's and application program packages.
CO-2	Understand the advantages and drawbacks of operating system
CO-3	Discuss the concepts of file management and file handing
CO-4	Recall the concepts of Data communication
CO-5	Apply various network layer techniques for Intranet and Extranet.

CO NO	Course Outcomes INTRODUCTION TO MICROCONTROLLER 8051- R6EPY9
CO-1	Describe the architecture of the INTEL 8051 and 8051family.
CO-2	To explain instruction formats, addressing modes, organization of instruction set and data transfer group.
CO-3	To learn logic group, arithmetic group and control transfer group
CO-4	To understanding of the assembly language programme.
CO-5	5 Impact knowledge of different types of external interfaces including key board, single LEDs, Bi-colour LEDs and Seven segment LEDs.

CO NO	Course Outcomes NANO PHYSICS- R6EPY6
CO-1	Understand the concepts of nanomaterials
CO-2	Learn about the formation of energy gap.
CO-3	Compare the chemical and physical approach by synthesis of nanomaterials
CO-4	Gain some basic ideas in characterization techniques
CO-5	Able to apply unique properties of nanomaterials

CO NO	Course Outcomes SOLID STATE PHYSICS-II - S6CPY14
CO-1	Compare the behavior of electrons in gases.
CO-2	Understand the occurrence of superconductivity
CO-3	Acquire the knowledge of diamagnetism, paramagnetism, ferro and antiferro magnetism
CO-4	Analyze the concept of magnetic resonance and point defects
CO-5	Learn about the dislocation

CO NO	Course Outcomes MOLECULAR SPECTROSCOPY - S6CPY15
CO-1	Determine the vibration for a triatomic molecule and identify whether they are infrared active.
CO-2	Determine whether the molecules are Raman active and stokes and antistokes lines in a Raman spectrum of a compound when given the energies of different transitions.
CO-3	Understand the concept of rotation of molecule diatomic and polyatomic molecules, chemical analysis by microwave spectroscopy.
CO-4	Analyzed the fundamentals of electronic spectra of diatomic molecules.
CO-5	Know about the nuclear magnetic resonance spectroscopy.

CO NO	Course Outcomes QUANTUM MECHANICS-II - S6CPY16
CO-1	Experience using mathematical tools to construct approximate quantum mechanical models and investigate the one- electron and two – electron atom model.
CO-2	Investigate variational method and WKB approximation for solving the Schrodinger equation which are applied to atomic, nuclear and solid- state physics
CO-3	Explain the relativistic quantum mechanical equation namely, Klein- Gordon equation, graph the concepts of spin arising naturally from the Dirac equation.
CO-4	Describe the principle of scattering theory.
CO-5	Pinpoint the formalism of partial wave analysis.

CO NO	Course Outcomes MAJOR PRACTICAL-III GENERAL PHYSICS- S6CPYL4
CO-1	Acquire the appropriate data accurately and keep systematic record of laboratory activities.
CO-2	To measure Hall coefficient and carrier density of given semiconductor crystal.
CO-3	Investigate the BH curve of a given ferromagnetic materials on the basis of coercivity.
CO-4	To determine the film thickness and calibration of spectrometer by Edser Butler Method
CO-5	Determine the susceptibility of the given liquid by Gauoy's method and Brewster angle measurements.
CO-6	Determine the thickness of single slit using laser diffraction method.
CO-7	Determine the band gap of using UV-NIR absorption spectra.
CO-8	Determine the resolving power of prism.

CO NO	Course Outcomes MAJOR PRACTICAL-IV PROJECT- S6CPYP
CO-1	Do a project work on a research problem and submit their findings as a report followed by

	a presentation in front of external examiner.
CO-2	Chance to work in various research fields as crystal growth, thin films and nano physics
CO-3	Get an exposure about higher studies in research.
CO-4	Learn the instrumentation required to analyse the samples.
CO-5	Analyse the result using software.

CO NO	Course Outcomes COMMUNICATION SYSTEMS- P6SPY2 (SSP)
CO-1	Study the classification of RF spectrum.
CO-2	Understand the principles of radio transmitters and their types.
CO-3	Learn the principles of laser, CD ROM, holography and fiber optics.
CO-4	Acquire the knowledge of wireless system and personal access communication system.
CO-5	Understand the satellite communication and basic diagram of an Earth.

CO NO	Course Outcomes FIBER OPTIC COMMUNICATION - S6SPY3 (SSP)
CO-1	Understand the principles of optical fibre.
CO-2	Gain knowledge of different mode of propagation.
CO-3	Study the characteristics of deposition methods.
CO-4	Understand the concept of attenuation in optical fibre and their types of loss.
CO-5	Demonstrate the dispersion of optical fibres.

CO NO	Course Outcomes OPTOELECTRONICS-
CO-1	To explain the concepts of Q-switching and types of resonators.
CO-2	To understand the basic theory of laser action and apply them to classify and explain the fundamentals of LASER and illustrate the application of LASER in various fields.
CO-3	Analyse the classification of optical fibre and various application area.
CO-4	Demonstrate the principle of Holography and its instrumentation.
CO-5	Describe the basic Physics of non-linear optics and demonstrate different NLO phenomena.

CO NO	Course Outcomes CRYSTAL GROWTH AND THIN FILM- S6EPY11
CO-1	Explain the historical development of crystal growth
CO-2	Illustrate the crystal growth techniques and properties.
CO-3	Analyze the nucleation and their equations
CO-4	Demonstrate the nature of thin film and its technology.
CO-5	Formulate the deposition of various types of coating techniques of thin films
CO-6	Discuss the integrated circuits and other applications of thin films and crystal growth.

**DEPARTMENT OF CHEMISTRY**  
**B.Sc CHEMISTRY - AUCH**

PO NO	Programme Outcomes
PO – 1	Demonstrate, solve and an understanding of major concepts, theoretical principles and efficient problem solving skills in the following areas of chemistry (Analytical, Inorganic, Organic, Physical, Green and Nano chemistry, Food chemistry, Medicinal chemistry)
PO – 2	Understand the importance of the elements in the periodic table including their physical and chemical nature and role in the daily life
PO – 3	An ability to gain entry in to the knowledge available opportunities related to chemistry in the government services through public service commission particularly in the field of food safety, health inspector, pharmacist, water analyst, forensic lab and also in professional schools, graduate programs
PO – 4	An ability to achieve the skills required to succeed in the chemical industry like match industry, sugar industry, cement industry
PO – 5	An ability to conduct experiments, analyze data and interpret results while observing responsible and ethical scientific conduct

PSO NO	Programme Specific Outcomes
PSO – 1	Have sound knowledge about the fundamentals and applications of chemical and scientific theories through theory and practical.
PSO – 2	To explain nomenclature, stereochemistry, structures reactivity and mechanism of chemical reactions.
PSO – 3	Develop analytical skills and problem solving skills requiring application of chemical principles
PSO – 4	The enrichment of knowledge to become familiar with the different branches of chemistry like analytical, organic, inorganic, Physical, polymer, environmental and biochemistry
PSO – 5	To study the structure – activity relationship, understand good laboratory practices and safety and develop research oriented skills. To make aware to handle the sophisticated instruments / equipments.

CO NO	Course Outcomes Fundamentals of Inorganic chemistry-I – P3CCY5
CO – 1	To understand the basic concept of atomic structure, rules for filling up of atomic orbitals.
CO – 2	To know the periodic classification, periodic table and periodicity of properties.

CO – 3	To recognize the basic concepts in chemical bonding.
CO – 4	To describe the theories of chemical bonding.
CO – 5	To understand the basic knowledge of Laboratory hygiene and safety, Principles and techniques of semi micro qualitative analysis.

CO NO	Course Outcomes Fundamentals of Organic chemistry – P3CCY6
CO – 1	To understand the fundamental Of Organic chemistry like characteristics of Organic and Inorganic compound, Nomenclature of Organic compounds.
CO – 2	To learn the basics of purification techniques.
CO – 3	To describe the composition of Organic compounds and to solve the empirical formula and molecular formula related problems.
CO – 4	To recognize the fundamental aspects of reaction mechanism.
CO – 5	To explain the types of organic reaction.

CO NO	Course Outcomes Lab in Semi-micro qualitative analysis – Q3CCYL2
CO – 1	To understand basic concepts of Qualitative analysis
CO – 2	To identify the interfere and non-interfere anions (acid radical). How to eliminate the interfere anions
CO – 3	To analyse a mixture containing two cations (basic radicals) and group separation
CO – 4	To study the basic procedure of identifying cations and anions
CO – 5	To identify the cations and anions by the spot test and known the reported method.

CO NO	Course Outcomes General Chemistry-I – P3ACY3
CO – 1	To understand the types of reaction and reaction mechanism in Organic Chemistry.
CO – 2	To learn the Isomerism in organic compounds.
CO – 3	To get information about the principles and process of metallurgy.
CO – 4	To gain knowledge of modern field of radioactivity.

CO – 5	To solve the problems in Oxidation and Reduction.
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CO NO	Course Outcomes Lab in Qualitative analysis – Q3ACYL1
CO – 1	To describe the types of interfere and non-interfere anions (acid radical). How to eliminate the interfere anions
CO – 2	To analyse a simple salt containing cations (basic radical) and group separation
CO – 3	To analyse a salt, which have cation (basic radical) and anion (acid radical).
CO – 4	To confirm the cations and anions by the spot test.
CO – 5	To analyse a simple salt containing one basic radical and one acid radical macro method and known the reported method.

CO NO	Course Outcomes Inorganic chemistry – Q3CCY5
CO – 1	To study the Position of hydrogen in the general periodic table, characteristics of 1s and 2s block elements and some important compounds.
CO – 2	To learn the general characteristics of group 13, group 14 and group 15 elements.
CO – 3	To discuss the general characteristics of group 16, 17 and 18 elements.
CO – 4	To aware the knowledge of general characteristics of d- block elements
CO – 5	To update the general characteristics of d- block elements and its applications.

CO NO	Course Outcomes Organic and Physical chemistry – Q3CCY6
CO – 1	To acquire knowledge of Preparation and properties of aliphatic and aromatic hydrocarbon.
CO – 2	To understand the preparation and properties of aliphatic and aromatic alcohol.
CO – 3	To learn the preparation and properties of alkyl and aryl halides.
CO – 4	To know the concept of Gas law and derivation of critical constant
CO – 5	To gain knowledge about the Colligative properties

CO NO	Course Outcomes General Chemistry-II – Q3ACY4
CO – 1	To update the knowledge of Atomic structure
CO – 2	To learn the Periodic table and periodic properties
CO – 3	To discuss the Classification, preparation, purification, properties and applications of colloids.
CO – 4	To study the preparation and properties of Natural and synthetic rubber
CO – 5	To understand the general characteristics of important drug.

CO NO	Course Outcomes General chemistry-I – Q3CCY7
CO – 1	To understand symmetry in crystal systems, crystallography and experimental methods and determination of inter planar spacing-X-ray spectrophotometer-The Debye and Scherrer method.
CO – 2	To learn comparative study of properties of $\alpha$ , $\beta$ and $\gamma$ radiations, Detection and measurements of radioactivity and Principle of atom bomb and hydrogen bomb.
CO – 3	To study properties of inorganic polymer and role of metal ions.
CO – 4	To acquire knowledge and understand the preparation and properties of aromatic aldehyde, ketones and ethers
CO – 5	To describe the Preparation and properties of aliphatic and aromatic carboxylic acids.

CO NO	Course Outcomes Volumetric analysis – S3CCYL4
CO – 1	To estimate the amount of substance present in the whole of the given solution using acidimetry
CO – 2	To find out the amount of substance present in the whole of the given solution using alkalimetry
CO – 3	To calculate the amount of substance present in the whole of the given solution using permanganometric method
CO – 4	To estimate the amount of substance present in the whole of the given solution by iodimetric titrations
CO – 5	To gain the knowledge of fundamental concepts of accuracy and error analysis and its importance

CO NO	Course Outcomes General Chemistry-III – R4ACY4
CO – 1	To study fundamental knowledge of classification, manufacture and differences of carbohydrates.



CO – 2	To learn fundamental knowledge of petroleum and petrochemicals.
CO – 3	To know the importance of volumetric methods of analysis, acid-base and redox titration in analytical chemistry.
CO – 4	To understand the definition of Adsorption and its applications
CO – 5	To discuss and derive the chemical equilibrium and chemical kinetics.

CO NO	Course Outcomes FOOD CHEMISTRY – R3SCY2 (SSP)
CO – 1	To create an awareness about the Diet pattern and healthy food.,
CO – 2	To understand the importance of Water and minerals.
CO – 3	To learn the methods of Processing of food
CO – 4	To know the types of Food additives
CO – 5	To find out the quality of the food and test to identify the adulterants.

CO NO	Course Outcomes Dairy Science – R4NCY1 (NME)
CO – 1	To acquire knowledge of Composition, properties and detection of adulteration in milk.
CO – 2	To understand the methods of Milk processing
CO – 3	To gain knowledge about the methods of milk powder processing
CO – 4	To prepare the milk products of Butter and Cheese
CO – 5	To know the dairy products of Ghee and Ice-Cream, To visit to a Dairy unit/farm and learn the basic methods.

CO NO	Course Outcomes General chemistry-II – S3CCY8
CO – 1	To describe the chemical equilibrium and distribution law.
CO – 2	To acquire the basic knowledge of rate of reaction, rate law, rate constant & order and molecularity of a reaction and derivation of first, second, zero and fractional order reactions.
CO – 3	To gain detail knowledge of catalysis and surface chemistry.
CO – 4	To discuss the theory of Werner's, VB, CF and octahedral and square planar. To study bonding and

	structure of metal carbonyls.
CO – 5	To study aldoximes and ketoximes in geometrical isomerism and optical isomerism of lactic, tartaric acids and optical active compounds.

CO NO	Course Outcomes General Chemistry-IV – S3ACY5
CO – 1	To study fundamental knowledge of Chromatography and colorimetric method of analysis
CO – 2	To learn the fundamental knowledge of Photo chemistry
CO – 3	To know the importance of Amino acids, peptides and proteins
CO – 4	To understand the importance of Fertilizers, insecticides, fungicides and pesticides.
CO – 5	To discuss the composition and manufacture of cement glass and ceramics.

CO NO	Course Outcomes Forensic Science – S3SCY3 (SSP)
CO – 1	To create an awareness about the Collection and preservation of evidences
CO – 2	To understand the importance of Examination and identification of drugs, alcohol and poisons
CO – 3	To learn the importance of Finger print and forensic serology
CO – 4	To know the Crime detection
CO – 5	To find out the Forgery and counterfeiting

CO NO	Course Outcomes Small Scale Industrial Chemicals – S4NCY2
CO – 1	To gain the ability to prepare the household chemicals like detergent powder and washing powder.
CO – 2	To know the preparative techniques of Chalk and crayons by hands on training
CO – 3	To learn the synthetic methods of Candles in laboratory
CO – 4	To prepare the Phenoils, incense stick and dhuna
CO – 5	To provide the hands on training of Ink (blue. black, red and rubber stamp ink) preparation.

CO NO	Course Outcomes Physical chemistry-I – T3CCY14
CO – 1	To gain basic aspects of thermodynamics and derivations of first law and zeroth law of thermodynamics.
CO – 2	To derive the second law and third law of thermodynamic in detailed explanation.
CO – 3	To draw the phase rule to one component and two component systems and gain knowledge in thermodynamics of ideal solution.
CO – 4	To acquire knowledge about the basic concept of physical properties and chemical constitution.
CO – 5	To understand the symmetry elements, group, classes, point group, matrix and construction of character table and Classification, preparation, purification, properties and applications of colloids.

CO NO	Course Outcomes Organic chemistry-I – T3ECY4
CO – 1	To acquire knowledge related to derivatives of amino acids, proteins, nucleic acids and vitamins.
CO – 2	To study the important concepts of hormones, enzymes, oil and detergents and theory, classification and preparation of dyes.
CO – 3	To learn the Preparation and properties of organic nitrogen compounds.
CO – 4	To explain the structural elucidation of alkaloids and terpenoids.
CO – 5	To understand and draw the concept of conformation and conformational analysis.

CO NO	Course Outcomes Applied chemistry-I – T3ECY3
CO – 1	To study basic aspects, manufacturing process of match and sugar and preparation of explosives.
CO – 2	To learn the Composition, properties and manufacturing process of cement, glass and ceramics.
CO – 3	To know the classification, manufacturing method, preparation and applications of fertilizer, insecticides and fungicides.
CO – 4	To understand Composition, characteristics, preparation, applications and differences of rubber, plastics and paper.
CO – 5	To gain the knowledge of Classification, characteristics, preparation, properties, manufactures and differences of fibers.

CO NO	Course Outcomes Gravimetric estimation and organic preparation – T3CCYL1
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CO – 1	To learn the fundamental concepts of precipitation and recrystallisation
CO – 2	To prepare the organic compounds of Benzanilide, Glucososazone, Benzoic acid, methyl salicylate.
CO – 3	To estimate the amount of lead and barium by gravimetric methods
CO – 4	To estimate the amount of calcium and Nickel by gravimetric methods
CO – 5	To learn the basic concepts and its reaction mechanism for the reactions of organic compounds.

CO NO	Course Outcomes Organic analysis and estimation – U3CCYL9
CO – 1	To estimate the amount of substance present in the whole of the given solution.
CO – 2	To find out the elements in the organic compound
CO – 3	To investigate the nature of the organic compound
CO – 4	To identify the functional group of the organic compound and its confirmatory tests.
CO – 5	To analyse the organic compound containing one functional group and confirmation by the preparation of a solid derivative.

CO NO	Course Outcomes Non-conventional & Renewable sources of energy – T3SCY4 (SSP)
CO – 1	To acquire knowledge about the concept of Renewable and non-renewable and conventional and non-conventional energy sources
CO – 2	To learn the concepts of Solar energy and solar energy collectors.
CO – 3	To utilize the renewable storage and applications of solar energy.
CO – 4	To understand the importance concepts of Wind energy, energy from oceans.
CO – 5	To gain knowledge about Geothermal energy, energy from biomass and bio fuels.

CO NO	Course Outcomes Organic chemistry-II – U3CCY18
CO – 1	To understand the mechanism of molecular rearrangements and classification of tautomerism.
CO – 2	To study the preparation, properties and synthesis of heterocyclic compounds.
CO – 3	To learn the Classification, mutarotation, comparison and interconversion of monosaccharides. Preparation and properties and structural elucidation of di and polysaccharides

CO – 4	To understand the basic principles of UV-Visible and NMR spectroscopy.
CO – 5	To study the principles and types of chromatography and basis of mass spectrometry.

CO NO	Course Outcomes Physical chemistry-II – U3CCY19
CO – 1	To study the basic concepts of photo chemical reaction, laws of photo chemistry, photo physical process and photo chemical reactions.
CO – 2	To study the definition and importance of Ostwald's dilution law, PH, common ion effect, salt hydrolysis and buffer solutions.
CO – 3	To gain knowledge about the Faraday's laws of electrolysis, galvanic cells, electrode potential and electrochemical series.
CO – 4	To acquire knowledge about the electrolytic conductance, corrosion concept and batteries.
CO – 5	To understand the basic principles of rotational spectra, vibrational-rotational spectroscopy and raman spectroscopy.

CO NO	Course Outcomes Computer in Chemistry – U3CCY20
CO – 1	To acquire knowledge of Fundamentals of computer
CO – 2	To learn the Basic programming
CO – 3	To gain knowledge about the Basic programming applications in chemistry
CO – 4	To acquire knowledge about the basic programming and applications in Organic Chemistry
CO – 5	To understand the basic C-Programming applications in Inorganic chemistry

CO NO	Course Outcomes Green and Nano chemistry – U3ECY3
CO – 1	To acquire basic knowledge of Green chemistry Principles and reactions.
CO – 2	To study the importance of Green solvents and preparative methods of green synthesis
CO – 3	To gain knowledge about the Microwave assisted reactions and synthesis
CO – 4	To acquire knowledge about the Characterization, stability and synthesis of nano particles

CO – 5	To understand the synthetic methods of nano synthesis of nano sized semiconductor, ceramics, carbides and nitrides properties and applications.
CO NO	Course Outcomes Lab in Physical Chemistry – U3CCYL8
CO – 1	To acquire a knowledge of determination of molecular weights,
CO – 2	To find out the eutectic and critical solution temperature by using phase diagram and CST.
CO – 3	To investigate the nature of the thermo chemistry.
CO – 4	To find out the percentage composition of the compound by viscosity method.
CO – 5	To calculate the normality of the given solution by potentiometric and conductometric titration.

CO NO	Course Outcomes Medicinal Chemistry – (SSP)
CO – 1	To acquire knowledge of medicinal chemistry Terminology and classification of drugs
CO – 2	To learn the important concepts of Anesthetics, analgesics and antipyretics
CO – 3	To understand the applications of Sulpha drugs, antibiotics and antiseptics
CO – 4	To study the applications of Hypnotics, sedatives and tranquilizers
CO – 5	To gain knowledge about Antineoplastic and hypoglycemic drugs

CO NO	Course Outcomes CERTIFICATE COURSE – I - Instrumental methods of Chemical Analysis – CRCY1
CO – 1	To prepare the student to acquire specialization in Analytical Chemistry
CO – 2	To enable the students to get employed as Analytical Chemist in industrial laboratories
CO – 3	To learn the basics of Column Chromatography Analysis
CO – 4	To know about the Spectrophotometric determination of Nickel Using Dimethylglyoxime and identification of Organic compounds using UV- visible Spectrophotometer and Physico Chemical parameters of Water and Waste water analysis.
CO – 5	To get an insight into modern experimental techniques in the field of Analytical Chemistry and error analysis.

CO NO	Course Outcomes CERTIFICATE COURSE – II - Clinical Chemical Analysis – CRCY2
CO – 1	To acquire basic knowledge of Blood components
CO – 2	To learn the procedure for Collection and preservation of Blood samples
CO – 3	To study the Methods of Blood Analysis
CO – 4	To identify the constituents in urine and blood by qualitative analysis
CO – 5	To get a correlation data of Abnormal urine analysis.

## DEPARTMENT OF ZOOLOGY

### B.Sc ZOOLOGY- AUZO

PO NO	Programme Outcomes
PO – 1	This Programme offers theoretical as well as practical knowledge about different subject areas.
PO – 2	These subjects are include, Diversity I &II, Microbiology, Immunology etc.
PO – 3	This programme is most beneficial for students whohave a strong interest and background in zoology.
PO – 4	It is also advantageous for students who wish to pursue multi & Inter- disciplinary science courses in future.
PO – 5	It develops a self employed culture among the students and it makes the learner a successful Entrepreneur.

PSO NO	Programme Specific Outcomes
PSO – 1	Acquire the knowledge on the diversity of animals in relation to their Phyla and its classification.

PSO – 2	Understand the domain knowledge and its skills to identify the animals and investigate the nature of relationship, connecting link etc.,
PSO – 3	After the completion of these course students have the option to go for higher studies (ie M.Sc.,) and then do some research for the welfare of mankind.
PSO – 4	After the higher studies students can join as scientist and even look for professional job oriented courses.
PSO – 5	This programme also offers an opportunities in Indian civil services and Indian forest service etc.,

CO NO	Course Outcomes INVERTEBRATA – P3CZY4
CO – 1	Group the animals based on the morphological characteristics and structure
CO – 2	Illustrate the life cycle of Plasmodium
CO – 3	Understand the formation of coral reefs.
CO – 4	Identify the parasitic adaptations of Helminthes worm.
CO – 5	Understand the economic importance of insects.
CO – 6	Distinguish the different larval forms of Echinodermate.

CO NO	Course Outcomes LAB IN INVERTEBRATA – P3CZYL3
CO – 1	Observe the digestive, reproductive and Nervous system of cockroach through web resources.
CO – 2	Identify the mouth parts of Cockroach, Honey bee, and Housefly.
CO – 3	Differentiate the appendages of prawn.
CO – 4	Mount the body setae and penial setae of earthworm.
CO – 5	Know the characters of some typical spotters in Invertebrate animal.



CO NO	Course Outcomes CHORDATA– Q3CZY5
CO – 1	Clarify the characters of chordates and its affinity.
CO – 2	Gain the knowledge about the migration of fishes.
CO – 3	Distinguish the poisonous and non-poisonous snakes.
CO – 4	Inspect the flight adaptation and migration of birds.
CO – 5	Appraise the integumentary derivatives of mammals

CO NO	Course Outcomes LAB IN CHORDATA – Q3CZYL5
CO – 1	Observe the digestive, urinogenital and nervous system of frog through web sources
CO – 2	Mount the placoid scale of shark.
CO – 3	Label the different parts of brain, fore limb and hind limb of frog
CO – 4	Know the characters of some typical spotters in chordate animal
CO – 5	Observe the animal structures of chordates

CO NO	Course Outcomes CELL AND MOLECULAR BIOLOGY– R3CZY5
CO – 1	Gain the knowledge about microscopy, centrifugation, staining and cytological techniques.
CO – 2	Understand the difference between Prokaryotic and Eukaryotic cell membranes and organelles
CO – 3	Describe the specific features of nucleus and chromosomes.
CO – 4	Attain the knowledge of cell division and cancer cells.

CO – 5	Illustrate the structure of Nucleus amino acid and their types, properties and synthesis.
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CO NO	Course Outcomes LAB IN CELL AND MOLECULAR BIOLOGY - R3CZYL5
CO – 1	Acquire the knowledge of principles and working mechanism of different microscopes.
CO – 2	Mount the onion root tip for identify the mitotic phase
CO – 3	Prepare the human blood smear and observe the different forms of WBC.
CO – 4	Isolate the Eukaryotic DNA from goat liver.
CO – 5	Identify the given cell organelles.

CO NO	Course Outcomes DEVELOPMENTAL BIOLOGY – S3CZY6
CO – 1	Understand the process of gametogenesis.
CO – 2	Attain the knowledge about the mechanism of fertilization and parthenogenesis.
CO – 3	Write down the characteristics of cleavage and gastrulation.
CO – 4	Gain the knowledge about the process of organogenesis.
CO – 5	Describe the salient features of metamorphosis and Regeneration.

CO NO	Course Outcomes LAB IN DEVELOPMENTAL BIOLOGY – S3CZYL6
CO – 1	Demonstrate the metamorphosis in amphibian
CO – 2	Observe the tail regeneration of tadpoles.
CO – 3	Mount the different developmental hours of chick embryo.
CO – 4	Observe the life stages of insect.

CO – 5	Identify the developmental stages of frog and chick.
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CO NO	Course Outcomes
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CO NO	Course Outcomes
	HEALTH AND EDUCATION – R4NZY1 (NME)

CO – 1	Enlighten the basic aspects of good health, hygiene and sanitation.
CO – 2	Create awareness about communicable and non-communicable diseases.
CO – 3	Know the cause, symptoms and prevention of communicable and non-communicable diseases.
CO – 4	Develop healthy practices and Health awareness
CO – 5	Get to know the International Health organization

CO NO	Course Outcomes
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CO NO	Course Outcomes
	APICULTURE– S4NZY3 (NME)

CO – 1	Understand the introduction of Apirary
CO – 2	Experiment with the behavior of Honeybee.
CO – 3	Make use of the bee hives & bee keeper tools.
CO – 4	Assess the uses of various bee products
CO – 5	Inspect the pest and disease of honey bees

CO NO	Course Outcomes
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CO NO	Course Outcomes
	BASIC BIOTECHNOLOGY – T3CZY12

CO – 1	Attain the knowledge of history, scope of biotechnology.
CO – 2	Understand the recombinant technology and gene integration.
CO – 3	Get an idea about the techniques in biotechnology.
CO – 4	Describe the single cell culture, Biofertilizers and Nitrogen fixation.
CO – 5	Write the step involved in animal cloning.

CO NO	Course Outcomes
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CO NO	Course Outcomes
	GENETICS AND EVOLUTION– T3CZY14

CO – 1	Demonstrate the metamorphosis in amphibian
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CO – 2	Observe the tail regeneration of tadpoles.
CO – 3	Mount the different developmental hours of chick embryo.
CO – 4	Observe the life stages of insect.
CO – 5	Identify the developmental stages of frog and chick.

CO NO	Course Outcomes BIOSTATISTICS, BIOINFORMATICS AND COMPUTER APPLICATION – T3CZY13
CO – 1	Collect, Tabulate and present the data.
CO – 2	Solve the problem of central tendency, probability and chi-square test.
CO – 3	Correlate the biological data
CO – 4	Understand the concepts of bioinformatics tools like DDBJ, BLAST, FASTA, clustal W, Scanps, CPG, MMTK, etc.,
CO – 5	Apply the computer knowledge in windows Ms-Office and e-journals.

CO NO	Course Outcomes LAB IN GENETICS AND EVOLUTION, BASIC BIOTECHNOLOGY, BIOSTATISTICS AND COMPUTER APPLICATION AND BIOINFORMATICS – T3CZYL5
CO – 1	Verify the mendalian laws through monohybrid and dihybrid ratio.
CO – 2	Demonstrate the PCR, SDS techniques in biotechnology.
CO – 3	Know the aspects of some evolutionary spotters.
CO – 4	Observe the variation in finger prints of man.
CO – 5	Isolate the RNA from yeast cells.
CO – 6	Calculate the mean, median, mode and standard Deviation using neem leaf serration.
CO – 7	Interpret the biological data and analyse using biostatistics tools.

CO NO	Course Outcomes BIOCHEMISTRY – U3CZY13
CO – 1	Describe the concepts of pH and buffers and Biotechniques.
CO – 2	Explain the characteristics of carbohydrates and its biological importance.

CO – 3	Illustrate the structure and properties of proteins and amino acid.
CO – 4	Attain the knowledge about classification, types and properties of lipids.
CO – 5	Understand the types and importance of vitamins.

CO NO	Course Outcomes MICROBIOLOGY AND IMMUNOLOGY – U3CZY14
CO – 1	Understanding the knowledge of culture techniques and microbes.
CO – 2	Classify of microbes in different level.
CO – 3	Know the characters of bacteria, fungi, algae and virus.
CO – 4	Learn the pasteurization technology.
CO – 5	Study the basic cells and concepts of immunology.
CO – 6	Know the role of immunoglobulins.

CO NO	Course Outcomes ANIMAL PHYSIOLOGY – U3CZY15
CO – 1	Understand the concepts of composition of food and mechanism of digestion
CO – 2	Described the mechanism of respiration, composition and functions of blood.
CO – 3	Gain knowledge about urine formation and regulation of kidney function.
CO – 4	Illustrate the structure of muscles and mechanism of muscle contraction.
CO – 5	Attain the information about the structure of neurons and hormone.

CO NO	Course outcomes LAB IN BIOCHEMISTRY, MICROBIOLOGY AND IMMUNOLOGY AND ANIMAL PHYSIOLOGY – U3CZYL7
CO – 1	Measure the pH of various samples.
CO – 2	Qualitate the carbohydrate, protein and fatty acid
CO – 3	Understand the concepts of culture and staining techniques.
CO – 4	Find the ABO-Rh blood grouping.
CO – 5	Know the role of temperature and pH in amylase activity.
CO – 6	Operate the blood pressure instrument.
CO – 7	Estimate the haemoglobin in blood.
CO – 8	Estimate the blood sugar by quantitative method.

CO NO	Course Outcomes ORNAMENTAL FISH CULTURE – T3SZY4 (SSP)
CO – 1	Demonstrate the art of fish keeping and fish tank set up
CO – 2	Identify the characters of some ornamental fishes.
CO – 3	Acquire the knowledge about commercial production of freshwater ornamental fishes.
CO – 4	Examine the live and artificial feed production method and mode of transport.
CO – 5	Get an idea to marketing the aquarium fishes.

CO NO	COURSE OUTCOMES FOOD AND NUTRITION – U3SZY5 (SSP)
CO – 1	Attain the knowledge about food and its relation to health.

CO – 2	Learn the food preparation of rice, milk, fish and vegetables.
CO – 3	Acquire the knowledge from sources and function of carbohydrates, protein, lipids and vitamins.
CO – 4	Understand the significance and functions of minerals and water.
CO – 5	Access the knowledge about malnutrition and deficiency diseases.

CO NO	COURSE OUTCOMES CERTIFICATE COURSE IN APICULTURE – CRZY1/CRZY2
CO – 1	Obtain the knowledge on bee keeping and its significance.
CO – 2	Gain the knowledge about social organization and division of honey bees.
CO – 3	Understand about modern methods adapted for apiculture.
CO – 4	Learn the products and economic importance of bee keeping
CO – 5	Secure the knowledge about pest, parasites and diseases of honey bees.

### M.Sc ZOOLOGY- SPZO

PO NO	Programme Outcomes
PO – 1	Students gain the knowledge and skill in the fundamentals of animals and understand the complex interactions among various living organisms.
PO – 2	Analyze complex interactions among the various animals of different phyla and their distribution, relationship and their environment.
PO – 3	Awareness about environment and its conservation, pollution control and its importance.
PO – 4	Gain knowledge of communicable and non-communicable diseases to improve personal and public health.
PO – 5	Develops empathy and love towards animals
PO – 6	Apply the knowledge of internal structure of cell. It's function in control of various metabolic functions of organisms.
PO – 7	Students gain the deep knowledge of theory, practical and dissertation ie. Present work and seminar.

PO – 8	The above teaching module helps to develop skills, scientific temperament and also develop their overall personality.
PO – 9	Innovative programme organize for them to make them innovative to tackle common problem in various tools of life.

PSO NO	Programme Specific Outcomes
PSO – 1	Students develop in depth knowledge of theory, practical and dissertation work and seminar which will help them in pursuing research.
PSO – 2	Gain the knowledge about research methodology, effective communication and skills of problem solving methods.
PSO – 3	Contributes their knowledge for Nation building
PSO – 4	Analyse the mechanisms involved in life process upto the molecular level.
PSO – 5	Perform the analytical experiment in various fields in biological science.
PSO – 6	Identify research problem and to formulate scientific solution.

CO NO	Course Outcomes BIOCHEMISTRY AND BIOPHYSICS – P6CZY7
CO – 1	Understand the metabolic concepts of carbohydrates and illustrate the mechanism of glycolysis, TCA cycle and electron transport chain.
CO – 2	Describe the metabolism of protein.
CO – 3	Gain knowledge about the metabolism of lipids.
CO – 4	Classify the enzyme and mechanism of enzyme action.
CO – 5	Attain the knowledge about the laws of thermodynamics.



CO NO	Course Outcomes LAB IN BIOCHEMISTRY AND BIOPHYSICS – P6CZYL5
CO – 1	Classify the bacteria, virus, fungi and algae.
CO – 2	Understand the concepts of microbes associated with food.
CO – 3	Describe the process of fermentation and production of organic acids, antibiotics and fuel.
CO – 4	Get the knowledge about the air borne disease, food borne, water borne and vector borne disease.
CO – 5	Get an idea about the biofertilizers.

CO NO	Course Outcomes MICROBIOLOGY– P6CZY8
CO – 1	Classify the bacteria, virus, fungi and algae.
CO – 2	Understand the concepts of microbes associated with food.
CO – 3	Describe the process of fermentation and production of organic acids, antibiotics and fuel.
CO – 4	Get the knowledge about the air borne disease, food borne, water borne and vector borne disease.
CO – 5	Get an idea about the biofertilizers.

CO NO	Course Outcomes LAB IN MICROBIOLOGY – P6CZYL6
CO – 1	Understand the sterilization and culture technique.
CO – 2	Differentiate the gram positive and gram negative bacteria.
CO – 3	Observe the motility of lactobacillus through hanging drop techniques.
CO – 4	Write the special features of selected microorganisms.

CO NO	Course Outcomes BIOLOGICAL TECHNIQUES- P6EZY1
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CO – 1	Understand the concepts of microtomy and microscope.
CO – 2	Describe the principle and applications of colorimeter.
CO – 3	Gain knowledge about the measurement of pH and types of centrifugation.
CO – 4	Get an idea about the working principles and applications of different instruments.
CO – 5	Demonstrate the different electrophoresis techniques and application.

CO NO	Course Outcomes ANIMAL DIVERSITY – P6EZY3
CO – 1	Understand the concepts of classification and phylogeny of animals.
CO – 2	Describe the classical and modern methods of biosystematics and Taxonomic information system.
CO – 3	List out the general characters and outline classification of minor phyla.
CO – 4	Identify the living fossils, connecting and missing link.
CO – 5	Get an idea about the natural history of Indian subcontinent and wild life organization

CO NO	Course Outcomes GENETICS AND EVOLUTION – Q6CZY9
CO – 1	Understand the mendel's concepts and Experiments.
CO – 2	Determine the concepts of linkage, crossing over and syndromes.
CO – 3	Gain the knowledge about the population and Applied genetics.
CO – 4	Acquire the information about the Evolutionary concepts, Darwinism, Lamarckism and Neo-Lamarckism.
CO – 5	Get an idea about the speciation and patterns of evolution.

CO NO	Course Outcomes LAB IN GENETICS AND EVOLUTION – Q6CZYL8
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CO – 1	Verify the mendel's law using coin and colour beads.
CO – 2	Verify the Hardy-weinberg law.
CO – 3	Analyze the variation and observe the finger prints.
CO – 4	Identify the Homology, Analogy and Fossils.
CO – 5	Identify the museum specimens for adaptive radiation, mimicry and industrial melanis.

CO NO	Course Outcomes ANIMAL PHYSIOLOGY AND DEVELOPMENTAL BIOLOGY – Q6CZY10
CO – 1	Understand the digestion process in man and mechanism of circulation and respiration.
CO – 2	Gain knowledge of neuromuscular system, structure of kidney and mechanism of urine formation.
CO – 3	Illustrate the endocrine and nervous system of human.
CO – 4	Explain the structure and development of eye and ear.
CO – 5	Get an idea about IVF, stem cell bank and sperm bank.

CO NO	Course Outcomes LAB IN ANIMAL PHYSIOLOGY AND DEVELOPMENTAL BIOLOGY – Q6CZYL9
CO – 1	Develop the skill to observe the effect of temperature on human salivary amylase.
CO – 2	Estimate the O <sub>2</sub> consumption with related to temperature and pH.
CO – 3	Prepare the Haemin crystals.
CO – 4	Enumerate the RBC using haemocytometer.
CO – 5	Mount the chick blastoderm.
CO – 6	Record the blood pressure using sphygmomanometer.

CO NO	Course Outcomes NATURAL RESOURCES AND MANAGEMENT – Q6EZY5
CO – 1	Discuss the environmental ethics and philosophy.
CO – 2	Analyze the dynamics of natural resources.
CO – 3	Discuss the biodiversity and its conservation.
CO – 4	Find the importance of renewable and non- renewable energy resources.

CO – 5	Assess the levels of environment pollution and its management.
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CO NO	Course Outcomes ENTOMOLOGY– Q6EZY7
CO – 1	Classify the insects upto order level
CO – 2	Describe the economic importance of Honey bee, Silkworm and Lac insects.
CO – 3	Explain the nature of damage and control measures of pest.
CO – 4	Assess the economic threshold level and pest management.
CO – 5	Elaborate the economic importance of insects and biocontrol

CO NO	Course Outcomes BIOSTATISTICS, BIOINFORMATICS AND COMPUTER APPLICATION– R6CZY10
CO – 1	Determine the measure of central tendency.
CO – 2	Discuss the correlation and regression.
CO – 3	Compute the test of significance using t-test, chi square and ANOVA.
CO – 4	Outline the concepts of sequencing, database, sequence alignment and phylogenetics.
CO – 5	Apply various bioinformatics tools for the analysis of biological sequences.
CO – 6	Develop the various skills to apply the biological knowledge in computer application.

CO NO	Course Outcomes LAB IN BIOSTATISTICS, BIOINFORMATICS AND COMPUTER APPLICATION – R6CZYL10
CO – 1	Choose the appropriate sampling and interpret biological data.
CO – 2	Formulate the hypothesis and test of significance.
CO – 3	Apply the computer skills for biological data management and presentation.
CO – 4	Use database similarity search and retrieval tools in sequence analysis.
CO – 5	Collect the data through E-mail.

CO NO	Course Outcomes MOLECULAR BIOLOGY AND MICROBIAL GENETICS – R6CZY11
CO – 1	Obtain the knowledge on the chemistry of nucleic acid.
CO – 2	Assess the regulatory mechanism of nucleic acid.
CO – 3	Discuss the mechanism of protein synthesis.
CO – 4	Acquire the knowledge on the modern concepts of gene.
CO – 5	Illustrate the structure and life cycle of phages.

CO NO	Course Outcomes LAB IN MOLECULAR BIOLOGY AND MICROBIAL GENETICS – R6CZYL11
CO – 1	Isolate the plasmid DNA from bacteria.
CO – 2	Extract the RNA from liver of chick.
CO – 3	Estimate the DNA concentration by spectrophotometer.
CO – 4	Appraise the knowledge on life cycle of $\lambda$ phage.
CO – 5	Examine the characters of experimental model.

CO NO	Course Outcomes WILDLIFE MANAGEMENT AND CONSERVATION– R6EZY10
CO – 1	Obtain the knowledge on wildlife management in India.
CO – 2	Evaluate the need of wildlife protection and amendments.
CO – 3	Apply the knowledge to conserve the wildlife.
CO – 4	Analyze the threads faced by wildlife.
CO – 5	Create awareness among the public on the conservation of wildlife.
CO – 6	Gain the knowledge to conserve the biodiversity.

CO NO	Course Outcomes ENTREPRENEURIAL ZOOLOGY– R6EZY8
CO – 1	Explain the fundamental concepts of entrepreneurship.
CO – 2	Examine the composition of milk and milk products.
CO – 3	Develop the skill for rearing and management of poultry form.
CO – 4	Prepare the mushroom culture and inspect the pest and disease of mushrooms.
CO – 5	Demonstrate the act of fish keeping and fish tank set up.
CO – 6	Recall economic importance of earthworm.
CO – 7	Prepare the vermibed and biomanure harvest technology.

CO NO	Course Outcomes BIOTECHNOLOGY– S6CZY11
CO – 1	Understand the basic concepts of recombinant DNA technology.
CO – 2	Investigate the advanced techniques used in biotechnology.
CO – 3	Relate the steps involved in animal and plant tissue culture.
CO – 4	Elaborate the knowledge on microbial technology.
CO – 5	Apply the technological principles to solve the environmental problems.

CO NO	Course Outcomes LAB IN BIOTECHNOLOGY – S6CZYL10
CO – 1	Isolate the genomic DNA from Prokaryotic and Eukaryotic cells
CO – 2	Demonstrate the electrophoresis techniques such as SDS-PAGE.
CO – 3	Assess the nitrogen, Phosphorous, Potassium, Calcium content in vermicompost.
CO – 4	Obtain the knowledge on different biotechnological techniques.

CO NO	Course Outcomes IMMUNOLOGY– S6CZY12
CO – 1	Explain the structure of lymphoid organs and apply Antigen – Antibody reaction.
CO – 2	Interpret the mechanism involved in humoral and cell mediated immunity and categorizes the hypersensitivity.
CO – 3	Elaborate the importance of major histocompatibility complex in tissue.
CO – 4	Categorize the Autoimmune and Immuno deficiency disease.
CO – 5	Apply theoretical knowledge in Immunotechniques.

CO NO	Course Outcomes LAB IN IMMUNOLOGY – S6CZYL9
CO – 1	Isolate and enumerate the spleenocytes in Goat.
CO – 2	Identify the ABO and Rh blood group in man.
CO – 3	Assay the Haemoagglutination experiment in human blood.
CO – 4	Dissect the lymphoid organs in chick.
CO – 5	Demonstrate the techniques related to Immunodiffusion.
CO – 6	Obtain the knowledge on the functioning of lymphoid organs.

CO NO	Course Outcomes RESEARCH PROJECT – S6EZYP
CO – 1	Identify and reflect on where further training or skill acquisition is necessary for self improvement.
CO – 2	Write effective, scientific and technical communication based on the project.
CO – 3	Report research clearly, logically and ethically.
CO – 4	Interpret the research data in scientific and technical communities.
CO – 5	Prepare research proposal to seek financial aid.

#### DEPARTMENT OF BOTANY (ALLIED)

CO NO	Course Outcomes Major Core –I (Plant Diversity I: - Algae, Fungi, Bryophytes, Plant pathology and Agricultural Microbiology) – (SUBJECT CODE -S3ABY3)
CO – 1	To have a comprehensive knowledge of algae, fungi and bryophytes
CO – 2	To gain the knowledge about the economic importance of algae and fungi
CO – 3	To understand the symptoms, dissemination and control measures of plant diseases
CO – 4	To appreciate the role of microbes in Agriculture



CO – 5	To have a knowledge about nitrogen fixation
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CO NO	Course Outcomes Major Core –I
	Plant Diversity II: - Pteridophytes, Gymnosperms, Anatomy and Embryology (SUBJECT CODE-S3ABY4))
CO – 1	To gain knowledge about Pteridophytes plants
CO – 2	To understand the embryology of Angiosperms
CO – 3	To understand the interaction and functioning of various cell organelles and cell division
CO – 4	To know about the internal structure of various parts of the plant body
CO – 5	To acquire knowledge about gymnosperm plants

CO NO	Course Outcomes Major Core –I (Taxonomy of Angiosperm, Plant physiology, Forest Ecology) SUBJECT CODE-(T3ABY6)
CO – 1	To know the salient features of different families of angiosperms
CO – 2	To identify the plants with Binominal nomenclature
CO – 3	To understand the concept of metabolic activities of plants
CO – 4	To understand the importance of forest protection and to have a knowledge about the conservation and management of forests
CO – 5	To gain the knowledge of phytohormones.

CO NO	Course Outcomes Major Core –I (Applied Botany - Plant breeding, Horticulture, Economic Botany, and herbal medicine.
CO – 1	Appreciate nutritive value and used of food products with relevant applied
CO – 2	Aspects suited to problems of regional and national needs.
CO – 3	To know about different types of plant yielding drugs

CO – 4	To acquire knowledge about the various methods of propagation of plants.
CO – 5	To have a knowledge of commercial crop improvement methods
CO NO	<p><b>Course Outcomes</b>  <b>Allied Botany – Practical Paper I</b>            ALGAE, FUNGI, BRYOPHYTES, PTERIDOPHYTES, GYMNOSPERMS,            CELL BIOLOGY, ANATOMY, EMBRYOLOGY, PLANT PATHOLOGY            &amp; AGRICULTURAL MICROBIOLOGY)</p>
CO – 1	Identification of permanent slides showing cell inclusions and mitosis.
CO – 2	Sectioning, mounting and identifying T.S. of stem and root of Dicot
CO – 3	Sectioning, mounting and identifying T.S. of leaf of Dicot
CO – 4	Identification of Algal mixture.
	Sectioning, mounting of following Gymnosperms
CO – 5	Spotter identification- Cycas

CO NO	<p><b>Course Outcomes</b>  <b>Allied Botany – Practical Paper II</b>            ANGIOSPERM TAXONOMY, PLANT PHYSIOLOGY, HORTICULTURE            PLANT BREEDING, ECONOMIC BOTANY &amp; MEDICINAL BOTANY</p>
CO – 1	To dissect and mount the floral parts of the plants of the families prescribed in the syllabus. To describe simple setups in plant physiology.
CO – 2	
CO – 3	To describe the plants in technical terms
CO – 4	To assign the given plant to its family giving reasons.
CO – 5	To identify the economic products specified in the syllabus and point out the Botanical name, family, morphology of useful part uses.

CO – 6	Propagation method of horticulture –grafting.
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CO – 7	Lay out of kitchen garden.
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## **DEPARTMENT OF HISTORY**

### **B.A HISTORY- AUHI**

PO NO	Programme Outcomes
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PO – 1	Students will demonstrate in discussion and written work their understanding of different peoples and cultures in past environments and of how those cultures changed over the course of the centuries.
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PO – 2	Students will demonstrate in written work and class discussion the ability to recognize and articulate the diversity of human experience including ethnicity race, language, gender, as well as political, economic, social and cultural structures over time and space.
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PO – 3	Students will produce their own historical analysis or documents and develop the ability to think critically and historically when discussing the past.
PO – 4	The subjects introduced by the university should create job opportunities and make the students to face the competitive examinations.
PO – 5	History needs to be thought to promote self understanding.

PSO NO	Programme Specific Outcomes
PSO – 1	To appreciate contribution made by ancient people of the past in making present.
PSO – 2	To develop an enlightened attitude towards international understanding.
PSO – 3	Tourism, Environmental studies, fundamentals of computers is provides self employment.
PSO – 4	To attain a sense of tolerance in regards with ethnicity, language, gender as well as the cultural structure.
PSO – 5	To understand the great deeds and mistakes of the past and use it to analyse a given situation.

CO NO	Course Outcomes History of India From Ancient to 900 A.D- P3CHS3
CO – 1	To make the students understand and appreciate Indus and Vedic Civilization.
CO – 2	To make the students aware of the contribution and legacy of Ancient rule of India.
CO – 3	To make the students vast knowledge about Mauryan Administration.
CO – 4	To make the students understand ethical values of Buddhism and Jainism.

CO – 5	To help students understand Ancient Society and their place, so that they develop a sense of their Cultural heritage.
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CO NO	Course Outcomes HISTORY OF TAMIL NADU FROM SANGAM PERIOD TO 850 A.D – P3CHS4
CO – 1	To create an awareness of the legacy of Tamil Nadu during the Sangam period.
CO – 2	To make the students appreciate the greatness of our society art and architecture during the Pallava and Pandian Empire.
CO – 3	To know the Kalabras Rule in Tamil Country.
CO – 4	To know the vast idea about Administration of Pallavas and Pandiyas.
CO – 5	To make the students Bakthi movement and their impact in the Tamil Country.

CO NO	Course Outcomes MODERN GOVERNMENT I – P3AHS2
CO – 1	To create knowledge about various types of Constitutions.
CO – 2	To make the students to know separation of powers.
CO – 3	To create knowledge about various types of party system.
CO – 4	To know the students Salient Features of Constitution.
CO – 5	To make the students Judicial Review.

CO NO	Course Outcomes HISTORY OF INDIA FROM 900 TO 1707 A.D – Q3CHS6
CO – 1	To make the students understand and appreciate of Delhi Sultanate and Mughals.
CO – 2	To make the students aware of the contribution of Muslims to polity Religion Art and Architecture.
CO – 3	To know the students Administration under the Delhi Sultanate.
CO – 4	To know the students Achivements of Vijayanagar Kingdom.
CO – 5	To know the students Administration under the Mughal Empire.

CO NO	Course Outcomes HISTORY OF TAMIL NADU 850 TO 1529 A.D – Q3CHS7
CO – 1	To create an awareness of the Legacy of Tamil Nadu from 850 – 1529.
CO – 2	To make the students appreciate the greatness of Tamil Culture.
CO – 3	To know the Social Economic and religious conditions under the Chola Empire.
CO – 4	To know the Social Economic and Religious under the second Pandya Empire.
CO – 5	To help students understand impact of Vijayanagar rule in Tamil Nadu.

CO NO	Course Outcomes MODERN GOVERNMENT – II – Q3AHS3
CO – 1	To create knowledge about various types of Constitutions.
CO – 2	To make the students to know separation of powers.
CO – 3	To create knowledge about various types of party system.
CO – 4	To know the students Salient Features of Constitution.
CO – 5	To make the students Judicial Review.

CO NO	Course Outcomes HISTORY OF INDIA FROM 1707 TO 1947 A.D – R3CHS6
CO – 1	To create knowledge about the British period in India struggle from freedom and Reform movements.
CO – 2	Learners should be able to vast knowledge about establishment of Europeans in India.
CO – 3	Students to know about the Land Revenue System, Sati and Widow Remarriage Act.
CO – 4	To know about the Socio- Religious movement like Brahmasamaj, Arya Samaj.
CO – 5	To inculcate Patriotism.

CO NO	Course Outcomes History of Tamil Nadu 1529 to 1947 A.D. – R3EHS5
CO – 1	To highlights the Rise of Nayak Power their Administration.
CO – 2	To make the students understand the British Rule in Tamil Nadu.
CO – 3	To make the students Role of Tamil Nadu in various rebellions and

	freedom struggle movement.
CO – 4	To make the students understand the Socio Religious movements in Tamil Nadu
CO – 5	To describe the administration of Tamil Nadu after 1947.

CO NO	Course Outcomes FREEDOM STRUGGLE IN INDIA – R4NHSI
CO – 1	To create knowledge about the struggle for freedom in India in the minds of History students.
CO – 2	To develop national feeling.
CO – 3	To make the students to know about Indian National Congress and its activities.
CO – 4	To promote role of Tamil Nadu in the National movement.
CO – 5	To make the students to know about Gandhiji role in freedom struggle.

CO NO	Course Outcomes HISTORY OF INDIA 1947 TO 2000 A.D – S3CHS8
CO – 1	To create knowledge about the Contemporary History of India.
CO – 2	To know about the Foreign policy of India.
CO – 3	To know Educational Policy and development of Education System.
CO – 4	To know about the information Technology in day today life.
CO – 5	To know new economic policy and rural development programmers.

CO NO	Course Outcomes WOMEN THROUGH THE AGES – S3EHS7
CO – 1	To make the students understand the Status of Women through the ages.
CO – 2	To make the students aware of the legal protection provided for the women.
CO – 3	To highlight the significance of women movements in India.
CO – 4	To reveal the contributions made by women personalities in India.
CO – 5	To make the students role of women in the freedom movement.

CO NO	Course Outcomes CONSTITUTION OF INDIA – S4NHS2
CO – 1	To create knowledge about the Indian constitution in the minds of other than History students.
CO – 2	To develop powers and functions of President'
CO – 3	To make the students to know about Loksabha and Rajyasabha powers.
CO – 4	To know about Judiciary court and High Court.
CO – 5	To know about Central and State relations.

CO NO	Course Outcomes History of Madurai –T3CHS16
CO – 1	To enlighten the students about Madurai its Rulers and their Contribution to culture from the period of Sangam to Nayaks.
CO – 2	To highlights the Sangam Pandiyas.
CO – 3	To make the students understand Madurai in the freedom movement.
CO – 4	To know about Eminent Freedom Fighters in Madurai.
CO – 5	To know Madurai Art and architecture

CO NO	Course Outcomes HISTORY OF SCIENCE AND TECHNOLOGY – T3CHS17
CO – 1	To inculcate the students to about the scientific inventions from 15 <sup>th</sup> century.
CO – 2	To make the students various scientific inventions and discoveries.
CO – 3	To make the students to know about the Science and Technology in the 18 <sup>th</sup> centuries.
CO – 4	To make the students Atomic science development.
CO – 5	To make the students Space Research and Space Mission in development of India.

CO NO	Course Outcomes HISTORY OF EUROPE 1789-1914 A.D – T3CHS15
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CO – 1	To create awareness in the minds of the students about the historical facts of Europe during 1789-1914 A.D.
CO – 2	To develop enlightened attitude towards international understanding.
CO – 3	To make the students to know Rise of Napoleon Bonaparte.
CO – 4	To make the students to know unification of Italy.
CO – 5	To make the students to know Greek War of Independence.

CO NO	Course Outcomes INTRODUCTION TO COMPUTER CONCEPTS – T3AHS6
CO – 1	To know about the various facts of fundamentals computer concepts for future career.
CO – 2	To develop the knowledge functioning of Different Operating System.
CO – 3	To know the Different between Hardware and Software Systems.
CO – 4	To know the window Graphic.
CO – 5	To make the students File manager and Program manager.

CO NO	Course Outcomes EPIGRAPHY – T3EHS5
CO – 1	To inculcate the student to Read decipher the inscription as a Primary Source for the study of History.
CO – 2	To make the students to know eminent Epigraphic like George Dubler.J.F.Fleet.
CO – 3	To make the students to know Tamil Brahmi Inscriptions.
CO – 4	To make the students to know memorial and antiquity of South India.
CO – 5	To make the students Origin and growth of Vatteletuthu and Grantha inscriptions.

CO NO	Course Outcomes HISTORY OF EUROPE 1914-1945 A.D – U3CHS21
CO – 1	To create awareness in the minds of the students about the facts of European History.
CO – 2	To develop and enlightened attitude towards international understanding.
CO – 3	To make the students to know the League of Nations, Functions and achievements.
CO – 4	To make the students to know UNO main organs.

CO – 5	To develop international understanding of Foreign Policy.
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CO NO	Course Outcomes INTERNATIONAL RELATIONS SINCE 1945 – U3CHS20
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CO – 1	To create the knowledge about the origin and establishment of UNO.
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CO – 2	To create the knowledge of cold war causes and its effects.
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CO – 3	To make the students vast knowledge Regional Organizations.
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CO – 4	To make the students to know the diplomacy and Gulf war.
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CO – 5	To create the knowledge of Foreign Policy of U.S.A and Russia.
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CO NO	Course Outcomes ELEMENTS OF HISTORIOGRAPHY - U3CHS19
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CO – 1	To create knowledge about the Methodology of writing the thesis.
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CO – 2	To make the students to know history is Science of Art.
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CO – 3	To make the students to know Eminent Foreign historians like, Abdul Fazi and Nilakata Sastri.
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CO – 4	To make the Students to know historical Research and Criticism.
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CO – 5	To create knowledge about Foreign Policy of U.S.A, U.K, Russia, China, Pakistan and Srilanka.
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CO NO	Course Outcomes HISTORY OF WORLD CIVILIZATION - U3CHS22
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CO – 1	To create awareness and understand the various civilizations of the world and it's Origin, development, decay and its legacy to World Culture.
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CO – 2	To make the students to know Babylonian Civilization.
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CO – 3	To make the students to know Greek Civilization.
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CO – 4	To make students to know the Justinian Or Byzantine Civilization.
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CO – 5	To make the students to know the Zoroastrianism Confucianism.
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CO NO	Course Outcomes M.S.OFFICE, INTERNET, AND COMPUTER APPLICATION IN HISTORY - U3AHS7
CO – 1	To make awareness in the minds of Students about M.S.Office.
CO – 2	To know Internet, M.S. Excel.
CO – 3	To make the students to know M.S.Power point.
CO – 4	To develop the skill teaching of history with computer aided programmes.
CO – 5	To make the students M.S.Office internet concept is provide self employment.

**DEPARTMENT OF COMMERCE (AIDED)**

**B.Com (NCA) - AUCC**

PO NO	Programme Outcomes
PO – 1	The students will be ready for employment in functional areas like accounting, taxation, banking, insurance and corporate law.
PO – 2	An attitude for working effectively and efficiently in a business environment.

PO – 3	Learners will gain knowledge of various disciplines of commerce, business, accounting, economics, and finance, auditing and marketing.
PO – 4	Self-employment confidences develop.
PO – 5	Understanding legal issue/ law relating to banking and insurance sector.

PSO NO	Programme Specific Outcomes
PSO – 1	Understand the basic concepts of the commerce, management, accounting of & economics.
PSO – 2	Analyse relationship among commerce, trade industry, services, management and administration.
PSO – 3	Perform all accounting activities and can handle type of business very well.
PSO – 4	Understand application of knowledge of commerce in business service sector industry, marketing, finance entrepreneurship development etc.
PSO – 5	Develop communication skills and computer awareness and rules of income tax act.

CO NO	Course Outcomes BUSINESS COMMUNICATION – P1CM4
CO – 1	Develop oral and written business communication skills
CO – 2	The students will be able to understand about trade enquires, & also the concept of collection letter
CO – 3	To write up the Banking insurance & agency correspondence.
CO – 4	To Describe the company secretarial correspondence.
CO – 5	To prepare application letters & business report presentations.

CO NO	Course Outcomes FINANCIAL ACCOUNTING - I P3CCM4
CO – 1	To enable the students to get an idea vision of Accounting
CO – 2	To ensure the detailed coverage of final accounts

CO – 3	To have an idea of bill of exchange accounting
CO – 4	To apply BRS quantitative skills to help analyses and solve business problems
CO – 5	To understand the basic idea of depreciation accounting

CO NO	Course Outcomes M/S OFFICE– P3CCM5
CO – 1	To impart knowledge regarding concepts of Dos and Windows
CO – 2	To learn how to create the document with the help of features of M/S Word.
CO – 3	To learn how to use the formulas for calculation with the help of functions of M/S Excel
CO – 4	To learn how to design and features of M/S Power point.
CO – 5	To explore the Microsoft office Access and other features.

CO NO	Course Outcomes LAB IN M/S OFFICE– P3CCML4
CO – 1	To create the knowledge regarding framing the application letter with resume and other file creating.
CO – 2	To learn the simple formula for basic calculation M/S Excel.
CO – 3	To use the formulas for salary and tax calculation in M/S Excel
CO – 4	To design the greeting cards and others for presentation in M/S Power point.

CO NO	Course Outcomes BUSINESS ORGANISATION– Q1CM5
CO – 1	To understand the basic concepts of Business.
CO – 2	To Equip the keen knowledge of formation of Business.
CO – 3	To Know about difference between Joint stock company and Partnership Firm.
CO – 4	To Acquire conceptual knowledge of company Management
CO – 5	To learn the Features of Co-operative Enterprise and Public Enterprise.

CO NO	Course Outcomes FINANCIAL ACCOUNTING-II – Q3CCM9
CO – 1	To recollect the basic concept and terms of the Consignment Accounting
CO – 2	To familiarize students with the accounting treatment adopted for joint venture accounts
CO – 3	To understand the basic in preparing single entry system
CO – 4	To apply the knowledge in evaluating for non-profit trading concerns
CO – 5	To understand the basic idea of fire insurance claim

CO NO	Course Outcomes PRINCIPLES OF MANAGEMENT –
CO – 1	To summaries the basic concepts of Management, Levels of management and its functions
CO – 2	To summaries the basic concepts of Management, Levels of management and its functions
CO – 3	To examine basis of Organizing, Departmentation, Span of control, Delegation of Authority and Decentralization
CO – 4	To evaluate the importance of Staffing, Directing, and motivational theories
CO – 5	To identify the concept of coordination, controlling and techniques of Control

CO NO	Course Outcomes FINANCIAL ACCOUNTING – III – R3CCM15
CO – 1	To enable the students to acquire knowledge in the preparation of regarding accounts.
CO – 2	To enable the students to understand the preparation of hire purchase and instalment purchase system.
CO – 3	To enable the students to understand the maintenance of branch accounts.
CO – 4	To enable the students to understand maintain of departmental accounts.
CO – 5	To enable the students to gain a sound knowledge on Indian accounting standards (Ind. As)

CO NO	Course Outcomes BUSINESS STATISTICS – R3CCM16
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CO – 1	To outline the uses of statistics in various business areas and demonstrate data in diagrammatical and graphical representations.
CO – 2	To Evaluate the importance of statistical tools like Averages, dispersion, index nos., Time series, Correlation and Regression.
CO – 3	To compute and interpret the correlation between two variables
CO – 4	To delineate the concept of Time series and Index numbers
CO – 5	To forecast the business trends in the form of report using time series

CO NO	Course Outcomes FUNDAMENTALS OF BUSINESS ENVIRONMENT –
CO – 1	To discuss the introduction to business environment
CO – 2	To examine the effects of political environment, social and cultural environment
CO – 3	To outline the theory of economic environment
CO – 4	To analysis the various organisation of IMF, GATT and WTO
CO – 5	To understand the meaning and concept of natural environment

CO NO	Course Outcomes MODERN BANKING – R3CCM18
CO – 1	To enable them to understand better customer relationship
CO – 2	To provide knowledge about deposits and types of customer
CO – 3	To aim to familiarize banking loans and advances
CO – 4	To create awareness about modern banking services like e-banking, m-banking and internet banking
CO – 5	To acquire knowledge on electronic fund transfer, e-money and core banking solutions

CO NO	Course Outcomes PRINCIPLES OF PRACTICE OF INSURANCE –
CO – 1	To understand the basic concepts of Insurance

CO – 2	To Enrich knowledge the life Insurance Policies
CO – 3	To Develop a clear understanding about the Fire insurance
CO – 4	To Enable students to know about basics the concept of Marine Insurance policy
CO – 5	To learn basic need of General insurance

CO NO	Course Outcomes FUNDAMENTAL OF ENTREPRENEURSHIP–
CO – 1	To classify the concepts of business, legal, cultural and global environments.
CO – 2	To categorize the role of economic and distinguish internal, external, micro and macro business environments.
CO – 3	To identify legal environments and build an environment analysis of business and elaborate TRIPS, TRIMS and GATS in India
CO – 4	To appraise the technological environment of business and the impacts of globalization.
CO – 5	To inspect the role of MNCs for the economy and develop innovative business ideas to face the environmental challenges.

CO NO	Course Outcomes PARTNERSHIP ACCOUNT – S3CCM17
CO – 1	To enable the student to understand the fundamentals and accounting procedure for partnership accounts.
CO – 2	To enable the student to understand the accounting treatment for administration of partners.
CO – 3	To enable the student to understand the account treatment for retirement of partners.
CO – 4	To enable the student to understand the handle the accounts relating to dissolution of partnership firm.
CO – 5	To enable to students to understand the handle the accounts relating to Piecemeal distribution cash sale to a company and amalgamation of partnership firm.

CO NO	Course Outcomes BUSINESS MATHEMATICS – S3CCM19
CO – 1	To explain the concepts of set theory, draw Venn diagrams to solve practical problems
CO – 2	To clarify the perception of commercial arithmetic using business level



CO – 3	To Experiment with the Mathematical Tools like Ratio, Proportion and Variation
CO – 4	To recognize the axioms of a system of Probability in the business level
CO – 5	To evaluate some business problems via Theoretical Distribution

CO NO	Course Outcomes EXPORT AND IMPORT PROCEDURE–
CO – 1	To enable to student to understand the preliminary for exports.
CO – 2	To enable the students to understand the different methods of payments used in the export.
CO – 3	To understand the export procedure and regulatory documents.
CO – 4	To enable to students to understanding the export clearance and quality inspection formalities.
CO – 5	To enable to student understand the preliminary for imports.

CO NO	Course Outcomes MODERN MARKETING – S3ECM3
CO – 1	To acquire an understanding of Fundamental concepts of Marketing.
CO – 2	To Enable the development of marketing strategies.
CO – 3	To Learn the concept on advertising and sales promotion.
CO – 4	To Analyze Marketing of physical channel of distribution.
CO – 5	To understand the Customer Relationship Marketing and Green Marketing.

CO NO	Course Outcomes INCOME TAX – I – T3CCM22
CO – 1	To introduce the basic concept of Income Tax
CO – 2	To acquire knowledge about income from salary
CO – 3	To calculate income from house property
CO – 4	To enlighten knowledge the income from business or profession

CO – 5	To provide knowledge about capital gains and income from other sources
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CO NO	Course Outcomes RETAIL MARKETING –
CO – 1	To outline the retail basic concepts and Retailing Scenario.
CO – 2	To apply the Retail Merchandising methods and Supply Chain management in retail industry.
CO – 3	To examine managing retail personnel and Human resources in retailing.
CO – 4	To evaluate the retail marketing strategies, marketing mix and process of personal selling.
CO – 5	To develop skills for Online retailing and the future of retailing.

CO NO	Course Outcomes BUSINESS LAW –
CO – 1	Explain the various provisions of the Indian Contract Act 1872.
CO – 2	It provides through knowledge about the concept of bailment, pledge & Lien.
CO – 3	Define various, legal procedures, under sale of Goods, Act 1930, & Apply the same in business.
CO – 4	Familiarize with Consumer Protection Act, 1986.
CO – 5	The students will be able to acquire the knowledge of the Arbitration Act.

CO NO	Course Outcomes COSTING – T3CCM23
CO – 1	To enable the students to get an ideal vision of costing.
CO – 2	To ensure the detailed coverage of material cost control.
CO – 3	To have an idea of labour cost control.
CO – 4	To have a vision of using process costing.
CO – 5	To ensure the students for preparing an operating cost statement.

CO NO	Course Outcomes COMPANY ACCOUNTS – T3ECM5
CO – 1	To understand the accounting procedure for issue of shares and debentures, redemption of preference shares and debentures.
CO – 2	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profits, if a company as per Companies Act 2013.
CO – 3	To Understand and Develop the skills of valuation of goodwill and shares
CO – 4	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes INCOME TAX – II – U3CCM25
CO – 1	To enabling the students to have a fair idea on set-off and carry forward of losses
CO – 2	To determine the concept of assessment of individual
CO – 3	To equip the students with thoughts and points on assessment of firms, AOP and companies
CO – 4	To determine the knowledge about income tax authorities
CO – 5	To acquire knowledge about procedure for assessment

CO NO	Course Outcomes HUMAN RESOURCE MANAGEMENT –
CO – 1	To discuss the basic idea of HRM
CO – 2	To evaluate the develop and evaluate the employee orientation training programs
CO – 3	To outline the various components and benefits of motivation
CO – 4	To analysis of trade union and workers effectively participation in management
CO – 5	To understand the human resource components of the organization's business plan

CO NO	Course Outcomes INDUSTRIAL LAW –
CO – 1	Familiarize with the law relating to Factories Act 1948.
CO – 2	The students should able to illustrate the role of trade union in the Industrial setup.
CO – 3	Students should able to outline the important causes & impact of Industrial disputes.
CO – 4	Identify the various provisions relating to workmen compensation Act 1923.
CO – 5	The students will be able to acquire the knowledge of ESI nature act Benefits of Employees.

CO NO	Course Outcomes MANAGEMENT ACCOUNTING – U3CCM23
CO – 1	To know about the practice of management accounting concepts
CO – 2	To have a wide knowledge in practising ratio analysis.
CO – 3	To prepare cash flow analysis.
CO – 4	To get an idea about decision making while learning marginal costing.
CO – 5	To get an idea of practicing standard costing.

### **B.Com (CA) - AUCCO**

CO NO	Course Outcomes DESKTOP PUBLISHING – P3CCN1
CO – 1	Identify desktop publishing terminology and concepts

CO – 2	Work with basic features of Word
CO – 3	Use critical thinking skills to design and create spread sheets
CO – 4	Identify the names and functions of the power point interface
CO – 5	Examine database concepts and explore the Microsoft office Access environment

CO NO	Course Outcomes LAB IN DESKTOP PUBLISHING – P3CCML5
CO – 1	The students will be able to perform documentation
CO – 2	The students will be able to perform Accounting operations
CO – 3	The students will be able to perform presentation skills
CO – 4	The students will be able to perform database creation

CO NO	Course Outcomes FUNDAMENTALS OF COMPUTER – P3ACN1
CO – 1	Bridge the fundamental concepts of computers
CO – 2	Familiarize Operating systems, programming language, peripheral devices
CO – 3	Understand Binary, Hexadecimal and Octal number systems and their arithmetic
CO – 4	Understand the basics of digital computer
CO – 5	Analyze various cloud programming models

CO NO	Course Outcomes INTERNET AND E-COMMERCE – Q3CCM8
CO – 1	Analyse the impact of E-Commerce business models.
CO – 2	Describe the infrastructure for E- Commerce.
CO – 3	Discuss legal issues and privacy in e-commerce
CO – 4	Demonstrate an understanding of the foundation and importance of E-Commerce
CO – 5	Describe internet trending relationships including Business to consumer, Business to Business

CO NO	Course Outcomes C PROGRAMMING – Q3ACN4
CO – 1	Outline the concepts of procedure oriented programming
CO – 2	Identify the various control structure.
CO – 3	Classify various functions in C.
CO – 4	Evaluate the file operations
CO – 5	Discuss and solve the commercial problem.

CO NO	Course Outcomes LAB IN C PROGRAMMING – R3ACL4
CO – 1	Read understand and trace the execution of programs written in C language
CO – 2	Write a C code for a given algorithm
CO – 3	Know concepts in problem solving
CO – 4	Introduces the more advanced features of the C language

CO NO	Course Outcomes LAB IN HTML – T3CCML2
CO – 1	Analyze a web page and identify its elements and attributes
CO – 2	Create web pages using XHTML and cascading style sheets
CO – 3	Develop skills in analyzing the usability of a web site
CO – 4	Be able to embed social media content in to web pages

CO NO	Course Outcomes OPERATING SYSTEMS – R3CCN3
CO – 1	Explain the functionalities of Operating system
CO – 2	Experiment the technique of scheduling, paging, and memory allocation

CO – 3	Compare memory management techniques
CO – 4	Elaborate the mechanism of inter process communication

CO NO	Course Outcomes C++ PROGRAMMING – R3ACN3
CO – 1	To understand how C++ improves c with object oriented features
CO – 2	To learn how to write inline functions for efficiency and performances
CO – 3	To learn how to design C++ classes for code reuse
CO – 4	To learn the syntax and semantics of the C++ programming language
CO – 5	To learn how to design and implement generic classes with C++ templates

CO NO	Course Outcomes LAB IN C++ PROGRAMMING – R3CCML4
CO – 1	Find the solution to a problem using object oriented programming concepts
CO – 2	Choose the relevant Oops concept and write programs
CO – 3	Evaluate programs and test data
CO – 4	Build data structure using C++

CO NO	Course Outcomes SOFTWARE ENGINEERING – S3CCN4
CO – 1	Know the concepts of software engineering
CO – 2	Estimate the software costing techniques
CO – 3	Gain knowledge of various software testing methods in software development process.
CO – 4	An ability to communicate effectively with a range of audiences
CO – 5	An ability to acquire and apply new knowledge as needed using appropriate learning strategies

CO NO	Course Outcomes RDBMS – S3ACN4
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CO – 1	Define the terminology, features, classifications and characteristics embodied in database systems.
CO – 2	Comprehend the concepts of basic database storage structure and access technique.
CO – 3	Know commercial relational database system by writing SQL using the system
CO – 4	Master the basics of SQL and construct queries using SQL
CO – 5	Master the basics of query evaluation techniques

CO NO	Course Outcomes LAB IN RDBMS – S3ACML2
CO – 1	Learn and apply Structured Query Language(SQL) for database definition and manipulation
CO – 2	Understand various transaction processing concurrency control mechanisms and database protection mechanism
CO – 3	Apply the basic concepts of Database Systems and Applications
CO – 4	Analyze and select storage and recovery techniques of database system

CO NO	Course Outcomes VISUAL BASIC PROGRAMMING – T3CCN5
CO – 1	Explain basic concepts and definitions
CO – 2	Express constants and arithmetic operations
CO – 3	Distinguish variable and data types
CO – 4	Manage and analyze prepared project with programs
CO – 5	Interpret and report obtaining results

CO NO	Course Outcomes COMPUTER NETWORKS – T3CCM17
CO – 1	Explain the use of computer networks and the significance of network security
CO – 2	Identify the functionalities and protocol of various layers in OSI reference model.
CO – 3	Distinguish between connection oriented service and connectionless services
CO – 4	Evaluate the importance routing algorithm, congestion control and domain name system.



CO – 5	Discuss the usage of IP address, electronic mail and the techniques of security.
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CO NO	Course Outcomes ACCOUNTING SOFTWARE – U3CCN7
CO – 1	Knowledge about Accounting terms
CO – 2	To learn computerized accounting technique
CO – 3	To understand financial accounting
CO – 4	To learn how to prepare final accounts and cost accounting
CO – 5	Knowledge regarding GST calculation

CO NO	Course Outcomes LAB IN ACCOUNTING SOFTWARE – U3CCNL5
CO – 1	Students learn to work with accounting software
CO – 2	Able to create company in software
CO – 3	Understanding on accounting and inventory vouchers and reports
CO – 4	Students will be able to generate number of reports

### M.Com - APCO

CO NO	Course Outcomes ADVANCED ACCOUNTING– P6CCM14
CO – 1	To understand the concepts of trading, profit and loss account and the balance sheet.
CO – 2	To Examine the concepts of Partnership accounts, construct accounts for admission, retirement / death of partners.
CO – 3	To analyse the various process of preparing accounts for non-trading organisations.
CO – 4	To identify the Approaches to social accounting, inflation Accounting and Human Resource Accounting.
CO – 5	To evaluate the Indian and International Accounting Standards and various Applicability of Accounting Standards.

CO NO	Course Outcomes FINANCIAL SERVICES – P6CCM11
CO – 1	To understand the role and function of the financial system
CO – 2	To examine the developed of money market
CO – 3	To outline the basic idea of SEBI and its role
CO – 4	To recollect the concept about structure of secondary market
CO – 5	To origin and growth of merchant banking and types of mutual fund

CO NO	Course Outcomes INTERNATIONAL BUSINESS – P6CCM12
CO – 1	To have developed an understand the major issue related to international business
CO – 2	To understand the various market entry modes in internationalization
CO – 3	To outline the role of IMF, WTO, UNCTD and World Bank
CO – 4	To recollect the organization's ability to enter and compete in international business
CO – 5	To have developed skills in foreign direct investment in global business and in modern business practice

CO NO	Course Outcomes ADVANCED BUSINESS STATISTICS – P6CCM14
CO – 1	To apply correlation and regression analysis including, both simple and multiple correlation and regression.
CO – 2	To develop an understanding of the theory of Probability, rules of probability & probability distributions.
CO – 3	To become aware of the concepts in sampling, sampling distribution and procedure for hypothesis.
CO – 4	To appreciate the importance and application of non-parametric tests in hypothesis testing (Chi-square test).
CO – 5	To appreciate the importance and application of non-parametric tests in hypothesis testing (F-test – ANOVA One way & Two way classification model).

CO NO	Course Outcomes HUMAN RESOURCE MANAGEMENT – P6ECM4
CO – 1	To introduce the concept of Human Resource management and Personnel Management, Evolution and Development of HRM.
CO – 2	To gain knowledge on the various aspects of Human Resource Planning i.e. Recruitment and Selection process, Placement and Induction.
CO – 3	To gain insight of in to the various sub system of HR, Training and Development Performance Appraisal, MBO Approach.
CO – 4	To learn the components Wages and Salary Administration and benefit Practices in Organization.
CO – 5	To familiarize with the labour relation and collective bargaining, national commission of labour.

CO NO	Course Outcomes ACCOUNTING FOR BUSINESS DECISIONS – Q6CCM19
CO – 1	To have developed an fundamental concepts of management accounting
CO – 2	To have a wide knowledge in practicing financial statements and ratio analysis
CO – 3	To prepare the cash flow analysis
CO – 4	To get an idea about decision making while learning about marginal costing and standard costing
CO – 5	To have developed skills in budgetary analysis

CO NO	Course Outcomes BUSINESS ENVIRONMENT AND POLICY – Q6CCM18
CO – 1	To classify the concepts of business, legal, cultural and global environments.
CO – 2	To categorize the role of economic and distinguish internal, external, micro and macro business environments.
CO – 3	To identify legal environments and build an environment analysis of business and elaborate TRIPS, TRIMS and GATS in India.
CO – 4	To appraise the technological environment of business and the impacts of globalization.
CO – 5	To inspect the role of MNCs for the economy and develop innovative business ideas to face the environmental challenges.

CO NO	Course Outcomes RESEARCH METHODOLOGY – Q6CCM17
CO – 1	To introduce the concept of research and research methodology.
CO – 2	To enable to students to understand the sampling.
CO – 3	To make students understand about collection of data.
CO – 4	To enable the students to understand the hypothesis.
CO – 5	To enable the students to write the research report.

CO NO	Course Outcomes OPERATIONS RESEARCH – Q6CCM16
CO – 1	Explain the applications & methodology employed in operations research & prepare solution to linear programming problems.
CO – 2	To be able to build and solve Transportation & Assignment problems using appropriate method.
CO – 3	Apply Queuing theory to solve business related problems.
CO – 4	To be able to design & solve simple models of CPM/PERT.
CO – 5	Enables to take best course of action out of several alternative courses for the purpose of achieving objectives by applying game theory.

CO NO	Course Outcomes ORGANISATIONAL BEHAVIOUR – Q6ECM5
CO – 1	To Understanding the Organizational behaviour theory and Approaches.
CO – 2	To aware of the concept in motivation, morale and conflict management.
CO – 3	To explore the group and group dynamics in the Organizational life.
CO – 4	To learn the components about the role of stress management
CO – 5	To comprehend the change management as it functions in the Organizational behaviour.

CO NO	Course Outcomes CORPORATE ACCOUNTING – R6CCM24
CO – 1	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profit, if a company as per Companies Act 2013
CO – 2	To Understand and Develop the skills of valuation of goodwill and shares
CO – 3	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 4	To acquire knowledge on Holding Company as per Companies Act - 2013
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes DIRECT TAXES – R6CCM25
CO – 1	To introduce the basic concept of Income Tax and income computation disclosure standards
CO – 2	To calculate the taxable income under different heads
CO – 3	To acquire knowledge about profits and gains from business or profession, Capital gains and other sources
CO – 4	To enabling the students to have a fair idea on set-off and carry forward of losses and assessment of individuals
CO – 5	To provide knowledge about assessment of firms and companies

CO NO	Course Outcomes APPLIED COSTING – R6CCM22
CO – 1	To enable the students to acquire the knowledge of job costing, batch and contract costing.
CO – 2	To provide the detained awareness about service costing.
CO – 3	To ensure the knowledge of using process costing.
CO – 4	To have a complete idea about tenders and quotations.
CO – 5	To familiarize the concepts of cost control, cost reduction and cost audit.

CO NO	Course Outcomes CUSTOMER RELATIONSHIP MANAGEMENT – R6CCM23
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CO – 1	To understand the basic concept of Customer Relationship Management.
CO – 2	To know the Customer Relationship Management in an effective way.
CO – 3	To know the participation of Customer Relationship Management Framework.
CO – 4	To Analyze the context of Customer Relationship Management.
CO – 5	To understand technology for Relationship Marketing and Internet Challenges of customer Relationship.

CO NO	Course Outcomes ENTREPRENEURSHIP DEVELOPMENT – R6ECM7
CO – 1	To enable the students to gain a sound knowledge on concept of entrepreneurship development
CO – 2	To enable the students to acquire knowledge on formulate project and prepare project report.
CO – 3	To enable the students to be familiar with the concept of institution support for small entrepreneurs.
CO – 4	To enable thee students to be familiar with the concept of starting a small scale industry.
CO – 5	To enable the students understand the concept of women entrepreneurs.

CO NO	Course Outcomes FINANCIAL MANAGEMENT – S6CCM23
CO – 1	To enable the students about the importance of financial management for a business.
CO – 2	To know about the various function to be considered while planning for investment decisions.
CO – 3	To know about the students regarding the various types of financial decision taken by the organisations.
CO – 4	To enable the students to understand working capital management inventories, receivable management and management of cash.
CO – 5	To understand the applications of certain dividend decisions and policies.

CO NO	Course Outcomes INDIRECT TAXES – S6CCM22
CO – 1	To make the students understand the different features of indirect tax law
CO – 2	To acquire knowledge the GST
CO – 3	To determine the GST input tax credit and GST audit
CO – 4	To enlighten knowledge the procedures and special provision under GST
CO – 5	To understand the Customs Act 1962

CO NO	Course Outcomes SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT– S6CCM24
CO – 1	To enable students to understand various dimensions of managing on investment programme.
CO – 2	To familiarize the students regarding the techniques of analysing securities being applied by fund managers.
CO – 3	Understand, analyse and Various strategies of futures and options in the derivatives markets.
CO – 4	Construct, Analyse, Select and Evaluate Portfolio Management Models
CO – 5	To develop an insight into various issues in portfolio construction, revision and evaluation.

CO NO	Course Outcomes INDIAN BANKING SYSTEM– S6CCM25
CO – 1	To introduce the concept of banking system in India.
CO – 2	To enable the students to understand the banking regulation Act 1949.
CO – 3	To enable the students to gain a sound knowledge on central banking functions.
CO – 4	To enable the student for understand the various type of banking company and non-banking company concepts.
CO – 5	To enable about the students to gain a knowledge on E-banking system.

CO NO	Course Outcomes RURAL MARKETING – S6ECM9
CO – 1	To Explore the various facets of Rural Marketing.
CO – 2	To understand the product Strategy and competitive product strategies Of the Rural Markets.
CO – 3	To know about Rural Marketing pricing strategy, and price policy.
CO – 4	To use of Advertising and sales promotion.
CO – 5	To Analyze the Distribution Strategies.

### **M.Phil COMMERCE - SMCO**

CO NO	Course Outcomes RESEARCH METHODOLOGY –P9CM1
CO – 1	To ensure the scholars to get an identical view of research.
CO – 2	To have a practice of data collection and tools used.
CO – 3	To get an idea of processing data.
CO – 4	To know about the correlation analysis.
CO – 5	To have the scholars to get sampling methods.

CO NO	Course Outcomes ADVANCED FINANCIAL MANAGEMENT –P9CM2
CO – 1	To enable the scholars to accented knowledge of financial decision making.
CO – 2	To have an analytical ability of capital budgeting.
CO – 3	To have an interpretation skills in the area of finance.
CO – 4	To ensure the detailed dividend decision.



CO – 5	To focus on international financial management concepts.
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CO NO	Course Outcomes HUMAN RESOURCES MANAGEMENT–P9CM3
CO – 1	To familiarity the scholars with the concepts of human resources management.
CO – 2	To enable the scholars to get human resources practices.
CO – 3	To have the knowledge on Role of human resources development.
CO – 4	To ensure the theories of personality development.
CO – 5	To have a depth information about human resources audit.

#### PGDCA -

PO NO	Programme Outcomes
PO – 1	The students acquire knowledge about basics and fundamentals of information technology, basic programming concepts of procedure oriented and object oriented languages (C and Java)
PO – 2	It will equip the students with skills required for designing, developing applications in Information Technology
PO – 3	To provides a detailed coverage of the key concepts in operating systems, database application, mobile commerce and computer software security
PO – 4	To give hands on to students while developing real life IT application as part of the study
PO – 5	Students are able to use their knowledge to develop different web and windows based applications

PSO NO	Programme Specific Outcomes
PSO – 1	Students will able to learn the latest trends in various subjects of computers & information technology
PSO – 2	To expose the students to open Source technologies so that they become familiar with it and can seek appropriate opportunity in trade and industry
PSO – 3	Design applications for any desired needs with appropriate considerations for any specific need on societal and industrial aspects

PSO – 4	Students become eligible to pursue MCA and M.Sc. in Information Technology
PSO – 5	Students can also pursue network related courses like MCNA,CCNA, RHCE.

CO NO	Course Outcomes PRINCIPLES OF INFORMATION TECHNOLOGY – PDCA9
CO – 1	To give students an in-depth understanding of why computers are essential components in business, education and society
CO – 2	To provide hands-on use of Microsoft Office applications Word, Excel and PowerPoint. Completion of the assignments will result in MS Office applications knowledge and skills
CO – 3	To should have knowledge about concepts and principles of information technology

CO NO	Course Outcomes MS-OFFICE LAB – PDCAL7
CO – 1	To Design Company Letter Pad with water marking
CO – 2	To use built in formulas to find out student performance and budget analysis
CO – 3	To obtain the functions of MS-Access Database

CO NO	Course Outcomes C – PROGRAMMING – PDCA10
CO – 1	To Students will learn how to practically design programs
CO – 2	To design algorithm to solve a problem
CO – 3	To provide a thorough knowledge in high level programming language C

CO NO	Course Outcomes C – PROGRAMMING LAB – PDCAL8
CO – 1	To identify the situations where computational methods and computers would be useful
CO – 2	To find out the problem and abstract the programming task involved
CO – 3	To write the program on a computer, edit, compile, debug, correct, recompile and run it

CO NO	Course Outcomes JAVA PROGRAMMING – QDCA3
CO – 1	To inculcate knowledge on object oriented programming approach
CO – 2	To learn the syntax and semantics of the java programming language
CO – 3	To provide a thorough knowledge in high level of the Java Programming

CO NO	Course Outcomes JAVA PROGRAMMING LAB – QDCAL1
CO – 1	To Understanding the OOP's concepts, classes and objects
CO – 2	To acquire knowledge on String Handling, to be familiar with the concepts like Inheritance, Polymorphism and to write reusable modules (collections of functions)
CO – 3	To Write, compile, execute and troubleshoot Java programming

CO NO	Course Outcomes RELATIONAL DATABASE MANAGEMENT SYSTEM – QDCA4
CO – 1	To provide a thorough knowledge of the back-end environment and working knowledge in Database
CO – 2	It aims at acquainting students better with the basics of DBMS and practical knowledge of databases using SQL and PL/SQL
CO – 3	The key goal is to prepare students for a professional career in the field of data administration and databasedesign

CO NO	Course Outcomes RELATIONAL DATABASE MANAGEMENT SYSTEM LAB – QDCAL2
CO – 1	To Understand database concepts and structures and query language
CO – 2	To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS and to Execute various advance SQL queries related to Transaction Processing
CO – 3	To Perform PL/SQL programming using concept of Cursor Management, Error Handling, Package and Triggers

CO NO	Course Outcomes COMPUTERIZED ACCOUNTING SOFTWARE – RDCA3
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CO – 1	To impart knowledge regarding concepts of Financial Accounting
CO – 2	To apply the knowledge of quantitative tools & techniques in the interpretation of data for managerial decision – making
CO – 3	To provide a thorough knowledge of the electronic accounting package and to enable the students to acquire practical knowledge in accounting software

CO NO	Course Outcomes COMPUTERIZED ACCOUNTING SOFTWARE LAB – RDCAL1
CO – 1	To Understand Tally ERP-9 with its importance & features
CO – 2	To get practical exposure of this software while solving problems and to attain knowledge on various concepts pertaining to formation of company & creation of different accounts
CO – 3	To know the concept of creating groups , ledgers and Taxation and To Create and form godown

CO NO	Course Outcomes MOBILE COMMERCE – RDCA4
CO – 1	To the primary goal is to prepare students for practical use of internet for online transactions like use of m-banking
CO – 2	To get good knowledge of various modes of online payment using various UPI apps
CO – 3	To facilitate the students to acquire the basic knowledge in the field of mobile commerce

CO NO	Course Outcomes HTML LAB – SDCAL3
CO – 1	To Create and insert a graphic within a web page and to understand the concept of hyper link within a web page
CO – 2	To acquire knowledge to design a table within a web page
CO – 3	To attain skill on insert heading levels within a web page

CO NO	Course Outcomes COMPUTER NETWORKS – SDCA3
CO – 1	To teach the computer networking and enumerate the layers of OSI model and TCP/IP model
CO – 2	Gain core knowledge of Network layer routing protocols and IP addressing
CO – 3	To provide a thorough knowledge of the back-end environment and working knowledge in Networking

CO NO	Course Outcomes VISUAL BASIC . Net – SDCA4
CO – 1	To understand and use the concepts of objects, primitive value, message, method, selection control structure, repetition control structures, object reference, container, and method parameter
CO – 2	To enable students to create a software package using VB
CO – 3	To facilitate the students to acquire knowledge in the field of Visual basic.Net

CO NO	Course Outcomes VISUAL BASIC . Net LAB – SDCAL2
CO – 1	To Use a modern IDE to visually and programmatically create programs with GUI's and to develop window based Applications
CO – 2	To Understand and use the event-driven model and its interaction and to Design and implement applications using an object-oriented methodology
CO – 3	To program Single document and multiple document interface

#### DEPARTMENT OF ECONOMICS (ALLIED)

CO NO	Course Outcomes MANAGERIALECONOMICS–P3ACM5
CO – 1	To enable the students to acquire knowledge on the fundamentals of Managerial economics
CO – 2	The students understand about Managerial economics, Economics and Managerial economics differentiation, functions of managerial economics and role of managerial economist
CO – 3	To enhance the students firm and industry, objectives of a modern business firm, five fundamental concepts
CO – 4	To know the demand, law of demand, types of demand, factors determining demand, measurement of elasticity demand, supply, law of supply and factors determining supply
CO – 5	To familiarise sales forecasting, factor involved demand forecasting, short term and long term demand forecasting, methods of demand forecasting for an established product and new product
CO – 6	To understand profit, profit planning, profit forecasting, pricing policies, methods of pricing policies and capital budgeting

CO NO	Course Outcomes INDIAN ECONOMY–Q3ACM6
CO – 1	To enhance the students to acquire knowledge on the Indian Economy
CO – 2	To understand the students nature and basic characteristics of Indian economy, HDI, poverty and unemployment, population and economic development
CO – 3	To familiarise the students on Agriculture, role and importance of Agriculture in the Indian economy, Agriculture inputs, Irrigation, fertilizer, pesticides, farm mechanisation, Green revolution and WTO
CO – 4	To enable planning, objectives and strategies of eleventh five year plan, NITI Aayog, Economic systems, Capitalist, Socialist and Mixed economy

CO – 5	To know the students about industrial policy resolution, MSMEs, Trade union, Trade policy and EXIM policy in recent years
CO – 6	To strengthening the students on new economic reforms, service sector, Liberalization, Privatization and globalisation

CO NO	Course Outcomes GENERAL ECONOMICS – I – R3AHS5
CO – 1	To enable the students to acquire knowledge on the fundamental of economics
CO – 2	To enable introduction to economics, main divisions of economics, basic economic concepts, goods, utility, wants, value, price, market and income
CO – 3	To know the students on consumption, Law of diminishing, Marginal utility, demand, law of demand and elasticity of demand, methods of measuring elasticity of demand, supply and elasticity of supply
CO – 4	To familiarise the students on value, price and output, perfect competition, imperfect completion, monopoly market, monopolistic competition, price and output determination
CO – 5	To understand the students about production, land, labour, capital, organization, theories of labour, localization of industry, large scale industries and MSMEs
CO – 6	To know the oligopoly market, features, kinked demand curve, cartel and price leadership

CO NO	Course Outcomes GENERAL ECONOMICS – II – S3AHS6
CO – 1	To enable the students to acquire knowledge on the Principles of economics
CO – 2	To understand the students about distribution, national income, marginal productivity theory of distribution, wages, profit and innovation theory of profit
CO – 3	To familiarise the students on money and banking, functions of money, functions of commercial banks and Central bank and demonetization in India
CO – 4	To know the public finance, sources of public revenue, Principles of taxation, public expenditure, GST and Public debt.
CO – 5	To strengthening the students on International trade, Balance of trade, Balance of payments, objectives and functions of IMF, IBRD and WTO

CO – 6	To enhance the students about planning and economic development, mixed economy, Aayog, Malthusian theory of population and optimum theory of population
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### DEPARTMENT OF ENGLISH (S/F)

#### B.A ENGLISH - SUEN

PO NO	PROGRAMME OUTCOMES
PO – 1	English Literature course in the Department of English expose students to a wide range of writing from Indian, British, and American.
PO – 2	It helps students to explore how writers use the creative resources of language in fiction, poetry, non-fiction prose, and drama-to explore the entire range of human experience.
PO – 3	Students are expected to strive, to be imaginative, rhetorically dexterous, and technically proficient and as a result, to gain a deeper insight into life.
PO – 4	Social Interaction: The students will interact effectively develop themselves in holistic cognizance of their surroundings and appreciate aesthetics in everyday life.
PO – 5	Effective Citizenship: The students will be able to exercise their rights correctly, and carry out their duties as responsible citizens of their country

PSO NO	PROGRAMME SPECIFIC OUTCOMES
PSO – 1	Acquaint the students with the social events that contributed to the growth of literature.
PSO – 2	Apply critical and technical theory and vocabulary to describe and analyze, and formulate an argument about literary and other texts.
PSO – 3	Introduce the major writers of English of various countries and acquaint the students with their works.

PSO – 4	Ensure a comprehensive study of the various genres representative of different ages.
PSO – 5	Enhance their languages skills through functional and applied grammar

CO NO	Course Outcomes ENGLISH I – P2SEN3
CO – 1	To illustration students to the best examples of prose and poetry in English so that they realize the beauty and communicative power of English.
CO – 2	To increase the ability to appreciate ideas and think critically
CO – 3	To improve their ability in English language.
CO – 4	To enable students to become competent users of English in real life situations.
CO – 5	Student will support their ability to write intellectual papers, essays and abstract using the process approach.

CO NO	Course Outcomes DRAMA - P3CEN7
CO – 1	Students enlarge the ability to understand significant cultural and societal issues presented in tragedy or comedy
CO – 2	Learner increase the skill to understand and analyze representative plays of various period
CO – 3	Students are created into capable educated and right construe of literary texts in English by developmental their ability to understand drama.
CO – 4	To use critical vocabulary, orally and writing, the summary and also to evaluate a performance
CO – 5	Scholars moreover get a value orientation by means of flowing justice in tragedy or comedy and comprehended human action and their consequences.

	Course Outcome GRAMMAR – P3CEN8
CO – 1	Student will practice the grammar skills and structures in conversations and discussions.
CO – 2	To utilize standard grammar, punctuation and spelling, be clear and brief informal practical writing
CO – 3	To permit students make a efficient study of the essentials of sentence structure and have a comprehensive table of the Modern English Language through illustrative, useful grammar and masterpiece.



CO – 4	Students will improve their language skill in English both in terms of confidence and clarity.
CO – 5	Students will develop their knowledge of exact custom of English language rules.

Course Outcomes LITERARY FORMS – P3AEN4	
CO – 1	To facilitate students realize the special genres.
CO – 2	To Explore work of literature confidential by form.
CO – 3	To analyze literary various cultures and historical eras.
CO – 4	To introduce students to the fundamentals of novel as a literary form.
CO – 5	To description students to some of the best→ terms of novel, drama, prose, poetry, etc.

Course Outcomes COMMUNICATIVE ENGLISH I – P4SECE1	
CO – 1	Acquire the ability to speak accurately, correctly and fluently
CO – 2	To enable students recognize the different field.
CO – 3	To develop the ability to understand ideas and→ think critically.
CO - 4	Improve LSRW- listening, speaking, reading and writing skills and the related sub-skills.
CO – 5	To consider and utilize body verbal communication to their benefit

Course Outcomes ENGLISH II - Q2SEN4	
CO – 1	To develop interest in prose, poetry and short stories in English and value the language and literary style
CO – 2	Ability to use reference material such as encyclopedia, dictionary etc.
CO – 3	Develop the useful wild aspect of language through a sequence of real life task.
CO – 4	Students will enlarge their reading speed and comprehension of intellectual critique

CO – 5	Students will make stronger their skill to write educational papers, essays and summaries the procedure approach
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**Course Outcomes**  
**POETRY - Q3CEN9**

CO – 1	Appreciate the fine distinction of poetic language and poetic drives.
CO – 2	Differentiate the kinds of poetry lyric ode ballad, elegy and dramatic monologue.
CO – 3	Consider the poems importantly.
CO – 4	Understand and respect poetry as a literary out form.
CO – 5	Apply the morality of legendary criticism to the analysis of poetry

**Course Outcomes**  
**FICTION – Q3CEN10**

CO – 1	Develop the ability to read literary narrative on this individual.
CO – 2	Exposed to different society mythology and history of various nation.
CO – 3	Enablement of the students to understand distinctive features of novels, shorter fiction and essays and relate the texts and contexts to real life.
CO – 4	Appreciate the innovative techniques of the novelist.
CO – 5	To familiarize them with different genre of fiction.

**Course Outcomes**  
**SOCIAL HISTORY OF ENGLAND – Q3AEN5**

CO – 1	To begin the students to the social background that throw into the development of English literature.
CO – 2	Recognize and discuss selected literary texts from the renaissance to the present
CO – 3	To expose the students to the culture, historical and social development of the English society.
CO – 4	To develop ability to pursue research in the field of classics
CO – 5	Increase academic and practical skills in terms of communication and presentation and also learn about human and literary values of classical period

Course Outcomes COMMUNICATIVE ENGLISH II – Q4SECE1	
CO – 1	To expand the ability to communicate powerfully in carrying routine conversation
CO – 2	To increase the time to improve your communication skills can be highly rewarding.
CO – 3	To learn to analyze unfamiliar words by understanding the structure of English language.
CO – 4	To communicate better writing skills by sensitizing the learners to the dynamics of effective writing.
CO – 5	To kindle their Critical thinking by designing and developing clean and lucid writing skills.

Course Outcomes ENGLISH LANGUAGE – III – R2SEN6	
CO – 1	To develop the major language skills – Listening Comprehension, spoken language, Reading Comprehension and written expression.
CO – 2	To significant English increases your chances of getting a good job in a multinational company.
CO – 3	It is also the language of international, media and the internet, so learning English is important for socializing and entertainment as well as work.
CO – 4	Being able to speak more effectively will help you to build stronger relationships with the people around you, and get your ideas across successfully.
CO – 5	Understand the concept of the theme and main ideas of the text

Course Outcomes AMERICAN LITERATURE – R3CEN8	
CO – 1	To make the student understand the conflicts - reasons and resolution.
CO – 2	Instills the background of civil war and transcendentalism.
CO – 3	Aids to comprehend the effects of racism.
CO – 4	Students will be able to appreciate and evaluate the literary merits of American literature
CO – 5	Extends an opportunity to study a brief history American literature – poetry, Drama and fiction

**Course Outcomes**  
**PROSE – R3AEN6**

- CO – 1    Students ability to make use of contextual clues to understand meaning
- CO – 2    Students develop to read with correct pronunciation stress, intonation and communication of voice
- CO – 3    To help the students to understand the passage and grasp its meaning.
- CO – 4    To enhance the understanding and increases pleasure in reading
- CO – 5    To enable learner to understand the passage by quiet reading.

**Course Outcomes**  
**HISTORY OF ENGLISH LITERATURE – R3EEN5**

- CO – 1    To help the students to know the broad range of literature in English from the beginning to the present.
- CO – 2    To enable the students have an insight into the various schools of thought and literary movements in the History of English Literature from the Age of Chaucer to the Post Modern Age.
- CO – 3    To focus on historical period issues are theme a critical approach, or a literary genre.
- CO – 4    To enable utilize phonetic dictionary symbol to continue to improve pronunciation
- CO – 5    Distinguish and properly enunciate voiced and voiceless sound with increasing intelligibility.

**Course Outcomes**  
**SHORT STORIES - R3SEN2 (SSP)**

- CO – 1    To promote writing skills in the context of writing a short story.
- CO – 2    To encourage the skills of appreciating and interpreting English prose.
- CO – 3    Students know about the significant of English short stories.
- CO – 4    Students effectively communicate ideas related to the literary genre of the short story during class and group activities
- CO – 5    Students write analytically about short stories using strategy

**Course Outcomes**  
**ENGLISH FOR EMPLOYMENT I – R4NEN2 (NME)**

- CO – 1 To enable the student face competitive examinations and also develop their vocabulary.
- CO – 2 To solve problem using required skills or knowledge.
- CO – 3 To make the students aware of various tools that is essential for competitive examination.
- CO – 4 To contribute to their overall personality development by improving their communicative skills.
- CO – 5 To develop their critical thinking capabilities focused through the course as an important need.

**Course Outcomes**  
**COMMUNICATIVE ENGLISH III – R4SECE1**

- CO – 1 To promote spontaneous communication in different occasions pertaining to the needs
- CO – 2 To increase vocabulary through the study of word parts, use of context clues and practice with a dictionary.
- CO – 3 To learn to analyze unfamiliar words by understanding the structure of English language
- CO – 4 Acquire the ability to speak accurately, correctly and fluently.
- CO – 5 They can write essays and reports and differentiate between objective and subjective writing.

**Course Outcomes**  
**ENGLISH IV – S2SEN7**

- CO – 1 To provide adequate skill training in functional grammar.
- CO – 2 Students will be able to recognize and understanding the meaning of target grammatical structures in return and spoken form
- CO – 3 Will be able to analyze literary works prose and poetry
- CO – 4 Grammar, reading and writing exercises will make the student to read any text and understand it and make them to think beyond the text.
- CO – 5 Students would have learnt the importance of skills of writing, reading, speaking and listening

**Course Outcomes**  
**SHAKESPEARE – S3CEN9**

CO – 1	to explain the students with Elizabeth drama and have a tendency of drama throughout the Elizabethan period
CO – 2	Develop enough ability for reading and understanding Elizabethan English to allow for better knowledge of Shakespeare's plays poems and sonnets
CO – 3	To analyze verbally and writing the relationship of the individual reader to Shakespearean literature.
CO – 4	Evaluate reaction to the themes and concern brought up in Shakespeare's plays, poems and sonnets
CO – 5	Compare the knowledge with themes and issues brought in Shakespeare's plays

**Course Outcomes**  
**BRITISH LITERATURE - S3AEN7**

CO – 1	To help the students to view British literature in its socio-cultural opinionated context.
CO – 2	To understand the theme, structure and style in British poetry, prose, drama and fiction.
CO – 3	Students develop and display a working knowledge of the historical and cultural context of British literature from the Anglo-Saxon period to the 18 <sup>th</sup> century
CO – 4	To learn various interpretative techniques to approach literary texts of varied genre.
CO – 5	Trace the enlargement history from middle-aged English period to the 19 <sup>th</sup> century.

**Course Outcomes**  
**ROMANTIC AGE - S3EEN7**

CO – 1	To expose the students to disseminate the force of the French revolution on idealistic critical tradition
CO – 2	Students develop the ability to define optimism and recognize its various themes.
CO – 3	To interpret and analyze the works of major romantic including Blake Burns , Wordsworth , Coleridge, Byron, Shelley, Keats and others
CO – 4	To write sound skillful essays showing insight into the major works of this Romantic period.
CO – 5	Students develop skill to recognizance of the historical and intellectual backgrounds dominating the periods being studied.

**Course Outcomes**  
**SHORT STORIES - S3SEN3 (SSP)**

CO – 1	To promote the skill of appreciating and interpreting literature students analyze short stories for their structure and meaning, using correct language
CO – 2	To support the skill of appreciating the commonwealth Literature
CO – 3	Students effectively communicate ideas related to the literary genre during class and group activities.
CO – 4	Students identify and describe different literary characteristics of the short stories form.
CO – 5	Students develop and present effective knowledge of the short story as a literary genre

**Course Outcomes**  
**ENGLISH FOR EMPLOYMENT II – S4NEN3 (NME)**

CO – 1	Student will be able to develop vocabulary and improve the accuracy in grammar.
CO – 2	To make the students aware of various tools that is essential for competitive examination.
CO – 3	The students would have strengthened their knowledge in pronunciation, phonetics and differentiating miscommunication from effective communication.
CO – 4	Students would have learnt the significance of skills of writing, reading, speaking and listening.
CO – 5	The students would have learnt the factors influencing the communication and the barriers of communication.

**Course Outcomes**  
**COMMUNICATIVE ENGLISH IV – S4SECE1**

CO – 1	To introduce different situation to interact and how to use polite expression in different situations
CO – 2	To enable students should be made familiar with words and construction of sentences.
CO – 3	Student to growing in-depth knowledge of the core areas of subject

CO – 4 Equip students with analytical skills in communicative English

CO – 5 They will help the student to write essays, and reports.

**Course Outcomes**  
**NEW LITERATURE – T3CEN16**

CO – 1 Discover the agony of the colonist through this original literature.

CO – 2 Elaborate on the concept of identity and independence revealed through post colonial literature.

CO – 3 To explain a clear understanding of the culture, genre and place.

CO – 4 Analyze the issue of identity and social problem in the society.

CO – 5 Identify the predominant themes of new literature

**Course Outcomes**  
**ENGLISH LANGUAGE TEACHING – T3CEN17**

CO – 1 Explain the aims and principles of teaching English as a second language

CO – 2 Discuss the various approaches and theories of teaching language

CO – 3 Understand the basics teaching of grammar vocabulary composition writing

CO – 4 Comprehend the methodologies, techniques and strategies

CO – 5 Articulate the reason for different types of test and evaluation.

**Course Outcomes**  
**LITERARY THEORIES – T3CEN18**

CO – 1 To develop a skill in applying various literary theories in explanation a specific text.

CO – 2 Students will be able to learn the history literary criticism and various literary theories.

CO – 3 Develop a skill in be appropriate various literary theories in comprehend specific text.

CO – 4 Students would have learnt the scope of orintalism and its importance.

CO – 5 Students would have understood different aspects of literary studies known as theory.

**Course Outcomes**  
**JOURNALISM AND MASS COMMUNICATION – T3EEN8**



- |        |  |
|--------|--|
| CO – 1 | To start the basic principles of journalism                        |
| CO – 2 | To develop the responsibilities of mass media                      |
| CO – 3 | To learn the various aspects in news gathering.                    |
| CO – 4 | To relate with the history, press law and principles of journalism |
| CO – 5 | To introduce the concepts and principles of publicity              |

**Course Outcomes**  
**SHORT STORIES – T3SEN6 (SSP)**

- |        |  |
|--------|--|
| CO – 1 | To promote the skill of appreciating the world literature.                                     |
| CO – 2 | To get better their sentence formation and mechanics   |
| CO – 3 | To students will be able to essay focus and structure  |
| CO – 4 | Present a proposal to articulate creativity and talent   |
| CO – 5 | Improve up critical thinking and writing ignites critical thoughts and moderator a work of art |

**Course Outcomes**  
**INDIAN WRITING IN ENGLISH – U3CEN22**

- |        |  |
|--------|--|
| CO – 1 | Students have understood how well the Indian culture is emulated in Literature.                      |
| CO – 2 | Students will be able to analysis how and why Indian literature emerged as a distinct field of study |
| CO – 3 | Trace the develop of history of English literature from its beginning to the present day             |
| CO – 4 | Students would have learnt the values of spiritual refinement in human life                          |
| CO – 5 | Students have understood how well the Indian culture is reflected in Literature.                     |

**Course Outcomes**  
**LITERARY CRITICISM – U3CEN25**

- |        |   |
|--------|---|
| CO – 1 | To learn the history of literary criticism and various literary theories. |
| CO – 2 | Trace the earlier period development of criticism                         |
| CO – 3 | Develop an aptitude for critical analysis of literary works               |
| CO – 4 | Interpret literary works in the light of various critical approaches      |

CO – 5	Compare and contrast major movement within literary theory of the 20th century.
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<p style="text-align: center;"><b>Course Outcomes</b> <b>TWENTIETH CENTURY LITERATURE – U3CEN24</b></p>
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CO – 1	To learn the various themes of twentieth century literature.
CO – 2	Study and interpret representative writing from 20 <sup>th</sup> century
CO – 3	Acquaint themselves with great convention of modern European drama.
CO – 4	Examine various literary techniques that writers of 20 <sup>th</sup> century we are writing their texts, and demonstrate an understanding of these procedure
CO – 5	Trace the nature of authority that all the classical texts have on modern English in British writings

<p style="text-align: center;"><b>Course Outcomes</b> <b>WOMEN WRITERS – U3CEN23</b></p>
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CO – 1	To gain knowledge of how and on what justification women writings are can be careful as divide genre.
CO – 2	To differentiate between sex and gender and how the afterwards is a social structure
CO – 3	Understand canonical texts written by women writers across different ages.
CO – 4	Be aware about the issue and concerns of the women writers of the developed, developing and under-developed countries.
CO – 5	Students would have been aware of the negative impact of female feticide and woman exploitation in society.

<p style="text-align: center;"><b>Course Outcomes</b> <b>SHORT STORIES SPEICAL AUTHOR SHASHIDESH PANDE – U3SEN6 (SSP)</b></p>
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CO – 1	To promote the skill of appreciating the short stories in Indian writing in English
CO – 2	To be able to explain how different types of prose convey stories or meanings
CO – 3	To be familiar with and able to use the English-language terminology connected to literary prose.
CO – 4	Write a text which analyzes literary works in correct English.
CO – 5	To be able to read literary prose texts critically and independently.

**DEPARTMENT OF MATHEMATICS (S/F)****B.Sc MATHEMATICS - SUMA**

PO NO	Programme Outcomes
PO – 1	To acquire knowledge in various aspect of mathematics.
PO – 2	To compute the algebraic, geometric and statistical quantities using suitable tools.
PO – 3	To comprehend the mathematical tools from basic axioms.
PO – 4	To realize the mathematical applications in other fields.
PO – 5	To attain analytic thinking.

PSO NO	Programme Specific Outcomes
PSO – 1	Inculcate the proficiency of writing proofs in pure mathematics papers through assignments.
PSO – 2	To acquire knowledge in analysis which include numbers, sets, functions and convergences.
PSO – 3	Motivate the students in order to acquire knowledge in aptitude examinations.  Nurture the skill of understanding and explaining the theorems in right way through seminars.
PSO – 4	Nurture the skill of understanding and explaining the theorems in right way through seminars.
PSO – 5	Inculcate the logical thinking and quantitative aptitude

CO NO	Course Outcomes ANALYTICAL GEOMETRY OF 3D AND VECTOR CALCULUS – P3CMA5
CO – 1	To attain knowledge about the angles and planes in two dimensional.
CO – 2	It is helpful to calculate the shortest distance between two lines.
CO – 3	To get vast knowledge about the sphere.
CO – 4	To discuss deeply about the sphere.
CO – 5	To demonstrate an understanding of the Green's theorem and Stroke's theorem and also to know about the detailed study of vector integration.

CO NO	Course Outcomes CALCULUS AND TRIGNOMETRY – P3CMA4
CO – 1	Describe the concepts of curvature, evolutes and envelopes.
CO – 2	Discriminate the multiple integrals and beta, gamma functions.
CO – 3	Gain Knowledge in the expansion of $\sin nx$ , $\cos nx$ and $\tan nx$ .
CO – 4	Explain the concept of hyperbolic function and logarithm of a complex number.
CO – 5	Understand the ideas of fourier series and trigonometric series.

CO NO	Course Outcomes CLASSICAL ALGEBRA – Q3CMA7
CO – 1	Acquire knowledge about sequence and the concept of algebra of limits.
CO – 2	Learn about the different kinds of series.
CO – 3	Solve the problems using root test and ratio test.
CO – 4	Develop the skills for solving the reciprocal equations.
CO – 5	Gain knowledge about concept of diminishing and increasing the roots.

CO NO	Course Outcomes DIFFERENTIAL EQUATIONS – Q3CMA6
CO – 1	Understand the methods in solving the linear differential equations with constant coefficient.
CO – 2	Understand the methods in solving the linear differential equations with variable coefficient. Know about the method of solving differential equation using variation of parameters.
CO – 3	To able solve the first order and first degree order differential equations. Solve simultaneous linear equations with constant coefficient and total differential equations.
CO – 4	Solve the first order partial differential equations for some standard types.
CO – 5	Understand the concept of Laplace transform and its application in solving differential equations. Use inverse Laplace transform to return formation funks.

CO NO	Course Outcomes MODERN ALGEBRA – R3CMA6
CO – 1	To clarify Mathematical Principles of general algebraic structure of various sets(such as real numbers, complex numbers etc.

CO – 2	To express a central role of cosets in Lagrange's theorem.
CO – 3	To compare the properties of isomorphic groups.
CO – 4	To acquire knowledge about algebraic structure of ring.
CO – 5	To analyze the properties of an integral domain.

CO NO	Course Outcomes QUANTITATIVE APTITUDE – R3EMA2
CO – 1	Understand the basic concept of quantitative ability.
CO – 2	Understand the basic concepts of logical reasoning skills.
CO – 3	Acquire satisfactory competency in use of verbal reasoning.
CO – 4	Solve campus placements aptitude papers covering quantitative ability, logical reasoning and verbal ability.
CO – 5	Compete in various competitive exams like, CAT, CMAT, GATE, GRE, UPSC etc

CO NO	Course Outcomes ALLIED MATHEMATICS I – R3AMA3
CO – 1	Gain knowledge about the concept of binomial and exponential series.
CO – 2	Determine the reciprocal equation and transformation of equation.
CO – 3	Describe the concept of radius of curvature and center of curvature.
CO – 4	Discriminate the integral calculus and reduction formula.
CO – 5	Understand the ideas of Demovier's theorem and hyperbolic function

CO NO	Course Outcomes MATHEMATICS FOR COMPETATIVE EXAMS I – R4NMA1 (NME)
CO – 1	Learn about HCF, LCM, Square roots and Cube roots and problems on numbers.
CO – 2	To able to solve problems on ages, percentages, profit and loss, partnership.
CO – 3	To solve the problems on chain rule, simple and compound interest.
CO – 4	Understanding series completion and coding decoding, Blood relations problems.

CO – 5	Compete puzzle test, Direction sense test and Logical venn diagrams.
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CO NO	Course Outcomes REAL ANALYSIS – S3CMA7
CO – 1	To outline the knowledge of fundamental properties in metric space.
CO – 2	To discuss deeply about the concepts of continuous functions between spaces.
CO – 3	To carry out the facts in a compactness and completeness of a metric space.
CO – 4	To construct the facts about the connected subsets of real numbers.
CO – 5	To demonstrate an understanding of the Baire’s category theorem and cantor intersection theorem.

CO NO	Course Outcomes PROGRAMMING IN C – S3EMA4
CO – 1	To develop programming skills using the fundamentals and basic of C language.
CO – 2	To study the advantages of user data type that provides flexibility for application development.
CO – 3	To enable to usage of arrays, structure and functions.
CO – 4	Apply pointer concepts in C.
CO – 5	Write program that perform operations using file.

CO NO	Course Outcomes LAB IN PROGRAMMING IN C – S3EMAL4
CO – 1	Write the C code for a given algorithm
CO – 2	Write a program to print different data types in C of their ranges.
CO – 3	Knows concepts in problem solving.
CO – 4	To do programming in C language.
CO – 5	To write diversified solutions using C languages.

CO NO	Course Outcomes MS OFFICE –
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CO – 1	Ability to navigate the word processor to create word documents for office use.
CO – 2	Understanding the basic concepts of find and replace, tool base, Header& Footer.
CO – 3	Understanding the basic machines and navigation of an Excel spread sheet and signing a work sheet for the organization purpose.
CO – 4	Apply the knowledge of mathematical functions and make the calculation easier for enormous data.
CO – 5	Master the basic concepts and appreciate the application of data base system.

CO NO	Course Outcomes MS OFFICE PRATICALS –
CO – 1	To have clear understanding about design a document using MS. Word.
CO – 2	To create different types of chart for sum data by using MS. Excel.
CO – 3	To perform mathematical function by using MS. Excel.
CO – 4	Learn to create the document into slide-show by using MS. PowerPoint.
CO – 5	To have clear understanding about Executing Queries by using MS. Access.

CO NO	Course Outcomes ALLIED MATHEMATICS II – S3AMA4
CO – 1	Used to compare and contrast the vector differentiation and their properties.
CO – 2	To get the knowledge about the vector integration through the simple applications of Gauss, Green and Stroke's theorem.
CO – 3	To attain the details of vector differentiation and also the integrating factors.
CO – 4	To know the methods of finding complementary functions and to find the second order differential equations with RHS in the trigonometric form.
CO – 5	To acquire Laplace Transform, partial differential equations, Lagrange's equation.

CO NO	Course Outcomes MATHEMATICS FOR COMPETATIVE EXAM II– S4NMA2 (NME)
CO – 1	know about time and work, time and distance and Boats and streams.

CO – 2	Acquire knowledge Alligation of mixture and race games of skill.
CO – 3	Understand the concept of permutation and combinations, probability and heights and distance.
CO – 4	Gain knowledge about Mathematical operations, Arithmetical reasoning.
CO – 5	Learn to solve the problems logic type I and type II.

CO NO	Course Outcomes ASTRONOMY – S3SMA2 (SSP)
CO – 1	To learn about celestial sphere.
CO – 2	To know about the Earth.
CO – 3	The knowledge about calendar.
CO – 4	To study about the Moon.
CO – 5	Analysis the Eclipses.

CO NO	Course Outcomes OPERATION RESEARCH – T3CMA13
CO – 1	Analyze and solve linear programming models of real life situations.
CO – 2	Know about the relationship between the primal and dual problems.
CO – 3	Learn about the applications to transportation and assignment problems.
CO – 4	Students will able to find inventory decisions costs using deterministic inventory problems with no shortage with shortages.
CO – 5	Acquire knowledge about the usage of game theory and simulation for solving real life problems.

CO NO	Course Outcomes COMPLEX ANALYSIS – T3CMA14
CO – 1	Compute sums, products, quotients, conjugate, modulus, argument of complex numbers, and write complex numbers in polar form.



CO – 2	Understand the complex functions, limits and continuity, differentiability, Cauchy – Riemann equations and analyticity.
CO – 3	Introduce elementary transformation and bilinear transformations, define cross ratio and find fixed points of bilinear transformations.
CO – 4	Understand the theory and techniques of integration, use Cauchy’s integral theorem and identify the isolated singularity such as removable, poles, or essential.
CO – 5	Find residues and evaluate complex integrals using the residue theorem, understand uses of improper integrals.

CO NO	Course Outcomes STATISTICS I – T3CMA15
CO – 1	Understanding the basic concepts of measures of central tendency and dispersion.
CO – 2	Students will be able to define moments, skewness and kurtosis and to find a straight line.
CO – 3	Acquire knowledge regarding correlation and linear regression.
CO – 4	To learn about the concepts of interpolation and theory of attributes.
CO – 5	Students will possess the ability to formulate solutions, analyze use of index numbers.

CO NO	Course Outcomes MECHANICS – T3CMA12
CO – 1	Understanding the concept of D-Alembert’s principle and Lagrange’s equation.
CO – 2	To demonstrate knowledge and understanding of the fundamental concept in Hamilton’s principle.
CO – 3	Acquire knowledge on the conservation theorems and symmetry properties.
CO – 4	Realize importance of impact and impulsive force of a particle on a surface.
CO – 5	The students will learn the phenomenon of collision and idea about center of mass.

CO NO	Course Outcomes OBJECT ORIENTED PROGRAMMING IN C++ – T3EMA7
CO – 1	Implement object oriented programming concept using basic syntaxes of control structures, strings and function for developing skills of logic building activity.
CO – 2	Identify classes, objects, members of a class and the relationships among them needed for finding the solution to specific problem.

CO – 3	Demonstrates how to achieve reusability using inheritance, virtual base classes and describes faster application development can achieved.
CO – 4	Demonstrate understanding and use of different exception handling mechanics.
CO – 5	To understand the importance of classes and objects along with constructors, arrays and functions.

CO NO	Course Outcomes LAB –OBJECT ORIENTED PROGRAMME IN C++ – T3EMAL4
CO – 1	Understand the difference between top-down and bottom – up approach.
CO – 2	Apply the concepts of object-orientation programming in constructor and destructor.
CO – 3	Understand how to apply the major Object-oriented concepts to implement inheritance.
CO – 4	Read and write data from files in C++ programs.
CO – 5	Write a program to operator overloading.

CO NO	Course Outcomes RELATIONAL DATA BASE MANAGEMENT SYSTEM
CO – 1	Understanding about traditional approach to information processing. Use of database DBMS, data manipulation language.
CO – 2	Compete the Database models, hierarchical network DBMS environment.
CO – 3	To demonstrate to build a database, creating opening, database entering data, EXACT searching.
CO – 4	Train the students to editing and modifying database, creating and printing formatted, multiple data file.
CO – 5	Analyse file maintenance performance memory variable command file creation.

CO NO	Course Outcomes RELATIONAL DATA BASE MANGEMENT SYSTEM PRATICAL
CO – 1	Demonstrate an understanding of the elementary feature of RDBMS.
CO – 2	Design conceptual models of a data base using ER modelling for real life application.
CO – 3	Able to develop structured query language.
CO – 4	Design efficient PL/SQL programs to access database.
CO – 5	Design and implement a database scheme for a given problem domain.

CO NO	Course Outcomes ALLIED MATHEMATICS III – T3AMA4
CO – 1	To know about the analytic function and Cauchy Riemann equation and also its application.
CO – 2	Useful to compare and contrast of the Rank Correlation co-efficient with statistics and also the Newton methods.
CO – 3	To know detailed study of attributes and Index numbers.
CO – 4	To attain more knowledge about matrices, solution of equations, and also Eigen values and Eigen vectors.
CO – 5	To demonstrate the understanding of the lagrange's theorem and to study deeply about the groups and punctuation groups.

CO NO	Course Outcomes DISCRETE MATHIMATICS – T3SMA2 (SSP)
CO – 1	To enable the students to learn about the propositions logical operations and constructions of Truth Table and Equivalence and Implications and NAND and NOR.
CO – 2	Analysis the method of functionally complete set and Normal forms and statement calculus and Quantifiers and rule CP.
CO – 3	Compute the Mathematical Induction and Recursion and Iteration and Sequences and Integers.
CO – 4	Understanding the Recurrences relations and solving linear homogeneous and non-homogeneous recurrence relation using generating function.
CO – 5	Demonstrate the Hasse Diagram of Partially ordered sets and lattices.

CO NO	Course Outcomes LINEAR PROGRAMMING PROBLEM – CRMA1
CO – 1	Define basic feasible solutions, slack and surplus variable.
CO – 2	Explain simplex big method and two phase method.
CO – 3	Prove dual of the dual in primal interpret dual simplex method.
CO – 4	Illustrate assignment problem and travelling salesman problem.
CO – 5	Define two person sum games maximin minimax principle saddle points.

CO NO	Course Outcomes LINEAR ALGEBRA – U3CMA16
CO – 1	Recognize the concepts of the terms span, linear independence, basis, dimensions and understand the concept of Linear transformations and matrices of linear transformations.
CO – 2	Introduce the new terms Basis and Dimensions, define Rank and Nullity
CO – 3	Introduce the concepts of Inner Product Spaces, define Orthogonality and Orthogonal Complements.
CO – 4	Acquire the knowledge of a matrix, basic operations, rank and determinant of a matrix, solve a system of Linear equations and distinguish between consistent and inconsistent system of equations.
CO – 5	Compute with the characteristic polynomial and equations of a given square matrix familiarize characteristic roots and characteristic vectors.

CO NO	Course Outcomes ORACLE – U3CMA17
CO – 1	Explain the features of database management systems and relational database.
CO – 2	To introduce the concepts of basic SQL as a universal data base language.
CO – 3	Analyze the existing design of a data base scheme and apply concepts of normalization to design an optimal database.
CO – 4	Retrieve any type of information from a data base by formulation complex queries in SQL.
CO – 5	Create and populate a RDBMS, using SQL.

CO NO	Course Outcomes LAB IN ORACLE – U3CMAL1
CO – 1	Design and implement a data base scheme for a given problem.
CO – 2	Populate and query a data base using SQL commands.
CO – 3	Create RDBMS with constraints and keys using SQL.
CO – 4	Program in PL/SQL including on (Data manipulation language)

CO – 5	Program in PL/SQL including DDL(Data Definition language).
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CO NO	Course Outcomes JAVA PROGRAMMING –
CO – 1	This course aim to train students for Java resolution, Java applets, rich object Environment, Oops, Object summary, Java genesis, Hello world, variables.
CO – 2	Analyse data types, simple types, Arrays Exception Looping.
CO – 3	To know about classes, string handling, construction, special string syntax, string buffer, string attached.
CO – 4	Explore about exception handling, Threads and single, Thread event loop, java thread model Thread runnable, File, Input stream. Understanding about streaming I/O, together URL connection.
CO – 5	Demonstrate about applets, Abstract window toolkit, Layout, Imaging.

CO NO	Course Outcomes JAVA LAB –
CO – 1	Students will obtain knowledge of the structure and model of the Java programming language.
CO – 2	How to use the Java programming language for various programming technologies.
CO – 3	Develop software in the Java programming language.
CO – 4	Choose an engineering approach to solving problem, starting from the required knowledge of programming.
CO – 5	Use the certain technologies by implementing them in the Java programming language to solve the given problem.

CO NO	Course Outcomes GRAPH THEORY – U3CMA18
CO – 1	Students are able to understand the graph as models. Students gain the knowledge sub graphs, paths, cycles; spanning trees.
CO – 2	Explanation about Direct graph, Types of directed graph. Students gain knowledge about Euler diagraph, fundamental circuits in diagraph.
CO – 3	Students are able to understand the concepts of enumeration types of enumeration. Theorems using for enumeration.
CO – 4	Students gain the knowledge of contact network, analysis and synthesis of contact network.
CO – 5	Students are able to apply the concept of Directed graph in networking problem of operation Research

CO NO	Course Outcomes STATISTICS II – U3CMA19
CO – 1	This course will enable the students to understand distribution in the study of the joint behaviour of two random variables.
CO – 2	Understand the basic concepts of probability and to know the various discrete and continuous distributions.
CO – 3	Students will be able to solve the problems of large and small samples.
CO – 4	Acquire knowledge about test of hypothesis and associated concepts.
CO – 5	To concepts the analysis of variance, one way and two way classifications, latin square design.

CO NO	Course Outcomes NUMERICAL ANALYSIS – U3CMA20
CO – 1	It is used for solving a system of equations.
CO – 2	It has application in all branches of engineering.
CO – 3	To know how to find the roots of transcendental equations.
CO – 4	To learn how to interpolate the giver set of values.
CO – 5	To learn numerical solution of differential equations.

CO NO	Course Outcomes ALLIED MATHEMATICS IV – U3AMA6
CO – 1	Explain the concept of LPP and some classes of LPP.
CO – 2	Obtain the primal and dual of LPP.
CO – 3	Examine the balanced and unbalanced assignment problem.
CO – 4	Determine the feasible solution, IBFS, Optimal solution of transportation problem.
CO – 5	Understand some basic concepts of game theory with saddle point and without saddle point.

CO NO	Course Outcomes INTEGRAL TRANSFORMS – U3SMA2 (SSP)
CO – 1	Make the students familiar with Integral Transforms in fourier transforms and alternative form of fourier complex integral formula and Laplace transform.
CO – 2	Provide the students with the basic knowledge of finite fourier transforms and properties of fourier transforms.
CO – 3	Acquire the knowledge of Laplace transform of Derivatives and integrals and final value theorem.
CO – 4	Analyse the problems of convolution and solution of differential and integral equations.
CO – 5	Understand the students to properties of Z-transforms and Z-transforms of some basic functions.

CO NO	Course Outcomes RESOURCE MANAGEMENT TECHNIQUE – CRMA2
CO – 1	Define nature and feature of OR analyze and solve linear programming models of real life situations.
CO – 2	Provide graphical solutions of LPP with two variables, and illustrate the concept of convex set and extreme points.
CO – 3	Understand the theory of the Simplex method.
CO – 4	Know about the relationships between the primal and dual problems, and to understand sensitivity analysis.
CO – 5	Learn about the applications to transportation, assignment and two person zero sum game problems.

### **M.Sc MATHEMATICS – SPMA**

PO NO	Programme Outcomes
PO – 1	To describe concept of mathematics both in pure and applied way.
PO – 2	To attain ability to spot, formulate and solve the critical problems.
PO – 3	To encourage the students for passing research in mathematics and other relevant fields.
PO – 4	To train problem solving skills for the students.
PO – 5	To stimulate the confidence of self learning.

PSO NO	Programme Specific Outcomes
PSO – 1	Encourage the students to do research in mathematics and other relevant field.
PSO – 2	To acquire knowledge of great circle in differential geometry which can be used in navigation.
PSO – 3	Understand the various concept of fuzzy mathematics and gain knowledge of applying them in Civil engineering, Computer engineering, Robotics, Medicine and Reliability theory.
PSO – 4	Motivate and help the students for competitive examinations like SET, NET etc.
PSO – 5	Use the mathematical knowledge for solving the real life problems.



CO NO	Course Outcomes ALGEBRA -1 – P6CMA6
CO – 1	Used to understand the elementary properties of a group and to know about the centre of a group, Cauchy theorem.
CO – 2	To attain knowledge about direct products and internal direct product. It also used to know about the finite abelian groups and its properties.
CO – 3	Use to get knowledge about the basic properties of rings and also to know about the Euclidean rings and its association.
CO – 4	To acquire knowledge about the polynomial rings, polynomial over the rational field and commutative rings and also to know about the modulus, sub modules and cyclic modules.
CO – 5	To carry out the facts of a solvable groups, subnormal, normal and composition series. And also to know deeply about the Schreier's refinement theorem, Butterfly theorem, Jordan –Holder theorem.

CO NO	Course Outcomes REAL ANALYSIS -1 – P6CMA9
CO – 1	Demonstrate the concepts of real numbers, Euclidean spaces, countability and Metric spaces.
CO – 2	Understand compact, perfect sets and connected sets.
CO – 3	Able to differentiate between convergent and divergent sequence, and identify Cauchy sequence.
CO – 4	Describe series, the set test, the ratio test, and the comparison test and apply these test to solve the problems.
CO – 5	Understand what is a continuous function, and can differentiate continuity and uniform continuity and use theorems to solve various problems.

CO NO	Course Outcomes DIFFERENTIAL EQUATIONS – P6CMA7
CO – 1	Have an understanding of ordinary differential equations and solve them.
CO – 2	Comprehend the Euler equations and Regular Singular points.
CO – 3	Understand the Bessel equation and Exact equation.
O – 4	Understand the concept of successive approximations and Lipschitz condition.
CO – 5	Have an understanding towards the origin of first order partial differential equation, non linear partial differential equations and solving them using Charpit's method.

CO NO	Course Outcomes DIFFERENTIAL GEOMETRY – P6EMA2
CO – 1	To interpret the various ideas, about space curves plane curves and surfaces.

CO – 2	To know about the knowledge of first fundamental forms and family of curves.
CO – 3	To learn about the properties of geodesies.
CO – 4	To discuss the concepts of Gaussian curvature and conformal mapping.
CO – 5	To gain knowledge about Liouville's formula for Geodesic curvature.

CO NO	Course Outcomes AUTOMATA THEORY AND FORMAL LANGUAGE –
CO – 1	Acquire a fundamental understanding of the central concepts of Automata Theory. Students gain the knowledge about the formal proof, Addition forms of proof and inductive proofs.
CO – 2	Students acquire knowledge to about finite automata, Deterministic finite automata and Non-Deterministic finite automata and finite automata with epsilon transitions.
CO – 3	Describe about Regular expressions, finite automata and regular expressions. Describe the applications of Regular expression and Algebraic laws of expression.
CO – 4	Proving the languages are not regular determine closure properties of regular language decision properties of regular languages. Describe the equivalent and minimization of automata.
CO – 5	Acquire knowledge about the concepts of context free grammar application of correct free grammar. Define pushdown Automata, language of PDA. Describe about equivalence of PDA's and CFG's and deterministic PDA.

CO NO	Course Outcomes MODERN APPLIED ALGEBRA –
CO – 1	Used to carry out the facts of Binary devices and states; and state machines, Turing machines, Incompletely Specified machines.
CO – 2	To attain more knowledge about Arithmetic expression, identifiers, Block structures in ALGOL.
CO – 3	To get more details about Boolean Polynomials, Boolean sub algebra and its applications.
CO – 4	To know more knowledge about the optimization computerizing optimization, Logic design and also it was useful to know about the NAND gates and NOT gates.
CO – 5	To attain more knowledge about the encoding and decoding; Block codes; matrix encoding techniques, Group codes, decoding tables, Hamming codes.

CO NO	Course Outcomes TOPOLOGY – Q6CMA12
CO – 1	Able to work easily with Basis for a topology, the order topology, the product topology and

	the subspace topology.
CO – 2	Increase the knowledge regarding Connectedness and its applications.
CO – 3	Able to understand the concepts of Compactness and limit point compactness.
CO – 4	Ability to acquire knowledge of Countability axioms, the Separation axioms and Normal
CO – 5	Understand the classical theorems such as, the Uryshon's lemma, the Tietze Extension and Tychonoff theorem.

CO NO	Course Outcomes REAL ANALYSIS-II – Q6CMA13
CO – 1	Understand differentiability, mean value theorems, L'Hospital's rule and solve using them.
CO – 2	Describe integration, differentiate, between Riemann Integral and Riemann- Stieltjes integral, and understand the properties of the integral. And understand differentiation and integration as inverse operations.
CO – 3	Demonstrate point wise and uniform convergence of functions.
CO – 4	Understand uniform convergence and integration; uniform convergence and differentiation; and the Stone-weierstrass theorem.
CO – 5	Gain knowledge of power series, the exponential and Logrithmic functions; the Trigonometric function and its properties.

CO NO	Course Outcomes GRAPH THEORY – Q6CMA14
CO – 1	Students are able to understand the graph as models. Students gain the knowledge about sub groups, paths, cycles, spanning trees.
CO – 2	Explanation about directed groups, types of directed groups. Students gain knowledge about Euler diagraph, fundamental circuits in diagraph.
CO – 3	Students are able to understand the concept of numeration, types of enumeration theorems using for enumeration.
CO – 4	Students gain me knowledge of contact network, analysis and synthesis of contact network.
CO – 5	Students are able to apply the concept of directed graph in networking problem of operation research.

CO NO	Course Outcomes OPERATION RESEARCH – Q6EMA7
CO – 1	Develop linear programming models for network, minimal spanning tree,

	maximal flow, shortest route problems.
CO – 2	Use CPM and PERT techniques, to plan, schedule, and control project activities.
CO – 3	Comprehend several queueing system models, such as single server models and multiserver models.
CO – 4	Understand the ideas of classical optimization problems.
CO – 5	Use some solution methods for solving the nonlinear programming models.

CO NO	Course Outcomes COMBINATIONAL MATHEMATICS –
CO – 1	To know more details about the Distribution of distinct and non-distinct objects.
CO – 2	To get vast knowledge about the linear recurrence relations with constant coefficients, and also elementary relations.
CO – 3	To know deeply about the principles of inclusion and exclusion.
CO – 4	Used to understand clearly about the Polya's fundamental theorem and also generalization of Polya's theorem.
CO – 5	To get knowledge about the connectedness of a graph, Euler path, Hamiltonian path.

CO NO	Course Outcomes VISUAL BASIC WITH PRACTICALS –
CO – 1	Explain the basic concepts of program building block control statements.
CO – 2	Master the basic concepts of Intrinsic controls and projects in VB.
CO – 3	Demonstrate understanding of and concept about data types, constants, and variables.
CO – 4	Learn to use the conditional statement loops, Arrays, Strings and type casting.
CO – 5	To create different types of means dialog boxes and enhancement of programs and Graphics.

CO NO	Course Outcomes ALGEBRA - III – R6CMA16
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CO – 1	It enable the students to understand the field extension, algebraic extension and transcendence of $e$ .
CO – 2	Gains the knowledge of roots of the polynomial splitting field irreducible polynomial.
CO – 3	Develop the knowledge more about roots, multiple roots. To understand the characteristics of a field.
CO – 4	Understand the concepts of solver by radicals, Galois group over rationals.
CO – 5	Acquire the knowledge about the finite field, splitting field of a polynomial and theorems on finite division rings.

CO NO	Course Outcomes STATISTICS – R6CMA13
CO – 1	Comprehend some special mathematical expectations and Chebyshev's inequality.
CO – 2	Study marginal and conditional distribution the correlation coefficient and stochastic independence.
CO – 3	Apply the Trinomial, Multinomial, Poisson, Gamma and Chi-square distributions to solve problems.
CO – 4	Study the concept of Transformations of variables of the Discrete and continuous random variable, the Beta, $t$ , and $F$ distributions and their applications.
CO – 5	Understand convergence in distribution, convergence in probability and the central limit theorem.

CO NO	Course Outcomes COMPLEX ANALYSIS – R6CMA14
CO – 1	Represent complex numbers algebraically and geometrically, analyze limit, continuity and differentiation of functions of complex variables and understand Cauchy-Riemann equations, and analytic functions.
CO – 2	Understand conformal mapping and Linear transformation.
CO – 3	Understand Cauchy theorem and Cauchy Integral Formulas and apply these to evaluate complex contour Integrals.
CO – 4	Study to classify singularities and poles, find residue and evaluate complex Integrals using the residue theorem.
CO – 5	Have an understanding to represent function as Taylor and Laurent series.

CO NO	Course Outcomes FUZZY MATHEMATICS – R6CMA15
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CO – 1	Learn crisp and fuzzy set theory.
CO – 2	Recognize fuzzy logic member ship function.
CO – 3	Decide the difference between crisp and fuzzy set theory.
CO – 4	Make applications on fuzzy logic membership function and fuzzy inference systems.
CO – 5	Evaluate fuzzy statistics applications.

CO NO	Course Outcomes NUMERICAL METHODS – R6EMA9
CO – 1	Obtain the solutions of transcendental and polynomial equations.
CO – 2	Solve by direct methods and iteration methods for solving system of equations.
CO – 3	Apply Hermite Interpolation, piecewise and Spline Interpolation.
CO – 4	Solve problems using interpolation.
CO – 5	Solve ordinary differential equations using numerical methods.

CO NO	Course Outcomes BIO-STATISTICS –
CO – 1	Understand the concept about the collection of data and how to differentiate primary and secondary data gain. Gain the knowledge about measures of central tendency to calculate the mean, median, mode, Geometric mean, and harmonic mean for this collected data.
CO – 2	Gain the knowledge to calculate Range, quartile deviation, co-efficient of variation, correlation regression lines and rank correlation to the data.
CO – 3	Acquire the knowledge about the fundamental concepts of probability and some distributions such as poison distribution and normal distribution.
CO – 4	Describe about chi-square test, degree of freedom. Students gain knowledge about the test Goodness of fit and test of independence.
CO – 5	Gain the knowledge about some applications such as Health surveys sample size determination. Describe about path co-efficient analysis in medicine and statistical modeling in health and disease.

CO NO	Course Outcomes BUSINESS STATISTICS –
CO – 1	Acquire the fundamental understanding about measures of central tendency such as Mean-median and mode and weighted Arithmetic mean. Able to gain the knowledge about merits and demerits of them.

CO – 2	Able to gain the knowledge to calculate Range, quartile deviation, standard deviation, co-efficient of variation of Measure of dispersion.
CO – 3	Students learn about Scatter diagram in Pearson's co-efficient of correlation and Rank correlation.
CO – 4	Students able to understand the meaning and uses of index numbers. Acquire the knowledge about the method of construction of the following methods. Laspeyres's method, Paasche method, Fisher's ideal index number, Marshall Edgeworth and Kelley's method.
CO – 5	Students are able to gain the knowledge about to gain knowledge about estimation of trend using method of least square and free hand curve.

CO NO	Course Outcomes MEASURE THEORY – S6CMA22
CO – 1	Gain knowledge of Lebesgue outer measure, Measurable sets, Measurable functions, Borel Measurability and its properties. And approximate measurable functions and compute Lebesgue measure.
CO – 2	Describe Hausdorff measure on the real line and compute it. Find the integration of non-negative functions.
CO – 3	Understand and compute Lebesgue's and Riemann Integration. And describe functions of Bounded variation.
CO – 4	Gain knowledge of Lebesgue's Differentiation theorem, connection between differentiation and integration in Lebesgue theory.
CO – 5	Learn Extension of a measure and its uniqueness Measure spaces.

CO NO	Course Outcomes FUNCTIONAL ANALYSIS – S6CMA19
CO – 1	Understand Inner product spaces and Hilbert spaces.
CO – 2	Construct orthonormal sets and conjugate spaces.
CO – 3	Understand the relevance of self-adjoint operators, normal, unitary operators and projection.
CO – 4	Distinguish between finite and infinite dimensional spaces.
CO – 5	To equip the students to use determinants of spectrum and the spectral values of an operator $H$ .

CO NO	Course Outcomes NUMBER THEORY – S6CMA21
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CO – 1	Have an understanding the concepts of divisibility and primes.
CO – 2	Comprehend the Mobius inversion formula, the Mangoldt function and Euler Summation Formula.
CO – 3	Understand Elementary asymptotic formula and Elementary theorems on Distribution of Prime Numbers.
CO – 4	Have an understanding to solve congruences.
CO – 5	Discuss Quadratic residue and quadratic reciprocity law.

CO NO	Course Outcomes CALCULUS OF VARIATIONS AND LINEAR INTEGRAL EQUATIONS – S6CMA20
CO – 1	Know types of integral equation and types of Kernals, Leibnitz's rule. And convert differential to Integral equations and vice versa. And solver problem in initial and boundary value problem.
CO – 2	Find the solution of Homogeneous Fredholm Integral equation and Volterra integral equations by successive substitution and successive approximation method.
CO – 3	Find the solution of Volterra's integral equations, Fredholm Integral equation, reduce Volterra integral equation into differential equation and reduce Volterra integral equation of first kind to second kind.
CO – 4	Describe Functionals, Euler's equation and solve problems using it.
CO – 5	Describe sufficient conditions for Extermals and solve

CO NO	Course Outcomes STOCHASTIC PROCESS – S6EMA13
CO – 1	Students gain the knowledge about stochastic process, specification of stochastic process and stationary process.
CO – 2	Students are able to get the knowledge about Generalisation of independent Bernoulli traits- Malkov chains classification of states and chains gain the knowledge about the Higher Transition Probability.
CO – 3	Students are able to understand the concept about poison process and related distributions. Students are able to understand the explanation about generalisations of Birth death process.
CO – 4	Students gain the knowledge about Renewal process and Renewal process in continuous time.
CO – 5	Students are able to gain the knowledge about stopping time, Wald's equations and Renewal theorem.



CO NO	Course Outcomes ECONOMETRICS
CO – 1	Have an understanding the concept of Goal and Division of Econometrics and properties of an Economic Model.
CO – 2	Discuss Markov theorem, Regression and analysis of variance approach and application.
CO – 3	Have an understanding the concepts of Regression with Qualitative variables.
CO – 4	Comprehend Economic problems.
CO – 5	Discuss the Model of simultaneous equation and the problem of identification.

CO NO	Course Outcomes APPLICATION OF STATISTICS
CO – 1	Understand point estimation confidence intervals for Mean same difference of means.
CO – 2	Have an understanding Measures of quality of estimators.
CO – 3	Understand the concept of Bayesian estimation, Rao-Cramer inequality and Maximum likelihood estimators.
CO – 4	Under the concept certain basic tests uniformly most powerful test and the sequential probability ratio test.
CO – 5	Have an understanding of analysis of variance and regression problem.

## DEPARTMENT OF MICRO BIOLOGY

### B.Sc MICRO BIOLOGY - SUMI

PO NO	Programme Outcomes
PO – 1	Describe how microorganisms are used as <b>model systems</b> to study basic biology, genetics, metabolism and ecology
PO – 2	Identify ways microorganisms play an <b>integral role</b> in disease, and microbial and immunological methodologies are used in disease treatment and prevention
PO – 3	Explain why microorganisms are <b>ubiquitous in nature</b> ; inhabiting a multitude of habitats and occupying a wide range of ecological habitats.
PO – 4	Cite examples of the <b>vital role</b> of microorganisms in biotechnology, fermentation, medicine, and other industries important to human well being
PO – 5	Demonstrate that microorganisms have an <b>indispensable role</b> in the environment, including elemental cycles, biodegradation, etc

PSO NO	Programme Specific Outcomes
PSO – 1	Understand the contributions of various scientist in microbiology and scope of various branches
PSO – 2	Understand various kinds of prokaryotic & eukaryotic microbes and their interactions
PSO – 3	Explain and describe importance of organic compounds and its chemistry found in living cells
PSO – 4	Understand and explain various processes of metabolism of carbohydrates amino acids and vitamins
PSO – 5	Explain DNA, RNA and protein structure and their synthesis
PSO – 6	Understand the concept of disease development, spread, control and eradication from society
PSO --7	Understand the basic concepts of gene and their regulation of action
PSO – 8	Explain and write various industrial fermentations and bioinstrumentation.

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CO NO	Course Outcomes GENERAL MICROBIOLOGY – P3CMB4
CO – 1	Outline the pioneers of microbiological research
CO – 2	Determine the diversity of microbes.
CO – 3	Classify the microorganisms
CO – 4	Analyze the way to control by physical & chemical methods
CO – 5	Explain the organization of prokaryotic cell
CO – 6	Outline the contributions of eminent scientists in the field of microbiology
CO – 7	Explain the methods of isolation of organisms by pureculture techniques

CO NO	Course Outcomes LAB IN GENERAL MICROBIOLOGY - P3CMBL1
CO – 1	Enable the students to understand the microbiology tools.
CO – 2	Students will be competent in culturing techniques.
CO – 3	Students will be able to observe & identify different types of bacteria.
CO – 4	Make use of pure culture & staining techniques
CO – 5	Illustrate the principles & use of microscopes
CO – 6	Appraise the sterilization & preparation of slant
CO – 7	Find the microbes from environmental samples

CO NO	Course Outcomes MICROBIAL PHYSIOLOGY & METABOLISM - Q3CMB5
CO – 1	Determine the phases of growth of microorganisms.
CO – 2	Assess the mechanisms of metabolic principles.
CO – 3	Organize the photosystem

CO – 4	Evaluate the biosynthetic pathway
CO – 5	Discuss the phases of microbial growth
CO – 6	Explain the mechanism of photo synthesis
CO – 7	Discuss the concepts of microbial physiology

CO NO	Course Outcomes LAB IN MICROBIAL PHYSIOLOGY & METABOLISM - Q3CMBL3
CO – 1	Determine the microbial growth
CO – 2	Classify microorganisms based on factors affecting the growth.
CO – 3	Demonstrate the biochemical test
CO – 4	Identify the bacteria using biochemical characteristics
CO – 5	Understanding laboratory principle
CO – 6	Practices in a biochemical test

CO NO	Course Outcomes MOLECULAR BIOLOGY & MICROBIAL GENETICS - R3CMB5
CO – 1	Explain the significance of central dogma of gene action
CO – 2	Have a conceptual knowledge about DNA as a genetic material ,enzymology& replication strategies
CO – 3	Understand the molecular mechanism involved in transcription & translation
CO – 4	Discuss the molecular mechanism underlying mutation, DNA damage & repair mechanisms
CO – 5	Justify the DNA as genetic material
CO – 6	Explain the mechanism of cell organelles
CO – 7	Analyze the regulation of gene expression

CO NO	Course Outcomes LAB IN MOLECULAR BIOLOGY & MICROBIAL GENETICS - R3CMBL5
CO – 1	Analyze and apply the techniques in molecular biology.
CO – 2	Make use of various techniques for molecular diagnosis
CO – 3	Obtain knowledge on concept of mutant
CO – 4	Discuss the models of genetics.
CO – 5	Explain the methods of isolating DNA
CO – 6	Discuss the replica plating technique for mutant selection.
CO – 7	Demonstrate the definition of inducible repressible state.

CO NO	Course Outcomes INDUSTRIAL MICROBIOLOGY I - S3CMB6
CO – 1	Obtain knowledge on culture of different organisms
CO – 2	Apply scientific approach in culturing organisms.
CO – 3	Illustrate the structural components & types of fermenter.
CO – 4	Understand & describe scope of industrial microbiology
CO – 5	Understand & operate in fermentor at various industries
CO – 6	Perform the methods of harvesting & product recovery
CO – 7	Workout the maintenance of fermenter

CO NO	Course Outcomes LAB IN INDUSTRIAL MICROBIOLOGY - S3CMBL6
CO – 1	Analyze Scientific approach in handling techniques
CO – 2	Obtain knowledge on culture of different organism
CO – 3	Analyze the different types of fermentor used in industrial process
CO – 4	The students obtain knowledge on screening of microbes from soil
CO – 5	Explain the principle & application of screening of microbes in industry.

CO – 6	It makes self reliance in the industrial application of microbiology in life & industry
CO – 7	Discuss the description of fermentors.

CO NO	Course Outcomes MEDICAL MICROBIOLOGY – T3CMB14
CO – 1	Show the importance of collection & transport of clinical specimen
CO – 2	Explain the pathogenesis, symptoms & laboratory diagnosis of microbial disease
CO – 3	Elaborate the guidelines for the microbiologist for preservation techniques
CO – 4	Explain the medically important bacteria, virus, Fungi
CO – 5	Evaluate the important parasitology pathogenesis
CO – 6	Develop the knowledge on antimicrobial chemotherapy
CO – 7	Identify discuss caused by fungi

CO NO	Course Outcomes BIOINFORMATICS – T3CMB15
CO – 1	Describe the history, scope & importance of bioinformatics & role of internet in bioinformatics
CO – 2	outline the concept of sequencing, databases, sequence alignment
CO – 3	assess the sequence similarity & significance of sequence alignment
CO – 4	apply various bioinformatics tools for the analysis of biological sequence
CO – 5	Classify different types of biological data bases
CO – 6	Overview about the applications of multiple sequence alignment.
CO – 7	Introduction to nucleotide & protein sequence analysis packages

CO NO	Course Outcomes PRINCIPLES OF IMMUNOLOGY – T3CMB16
CO – 1	Explain the concepts in immunology
CO – 2	Interpret the role of lymphoid organs

CO – 3	Determine the blood related parameters in man.
CO – 4	Outline, compare & contract the key mechanisms & innate & adaptive immunity
CO – 5	Understand & explain the immune system in cancer, tumor immunology.
CO – 6	Apply antigen antibody reaction for diagnosis of disease
CO – 7	Interpret the mechanisms involved in humeral cell mediated immunity

CO NO	Course Outcomes BIOCHEMISTRY – T3CMB17
CO – 1	Relate the structure of bio molecules with one another
CO – 2	Categorize carbohydrates based on their structure & properties.
CO – 3	Compare & contrast the structural configuration of proteins.
CO – 4	Criticize the structure & significance of nucleic acids
CO – 6	Apply the knowledge of biomolecules in biochemistry.
CO – 7	Outline the classification macromolecules.

CO NO	Course Outcomes LAB IN MEDICAL MICROBIOLOGY AND IMMUNOLOGY – T3CMBL10
CO – 1	Illustrate the composition & functions of blood.
CO – 2	Acquire the knowledge on total blood count
CO – 3	Obtain knowledge on culture of different microbes
CO – 4	Learn the culturing techniques
CO – 5	Identify the bloodgroups & its significance
CO – 6	Outline the pioneers of microbiological research.
CO – 7	Discuss the need of description of HIV structure

CO NO	Course Outcomes LAB IN BIOCHEMISTRY AND BIOINFORMATICS –T3CMBL11
CO – 1	Apply the knowledge of biomolecules in biochemistry.
CO – 2	Estimate the biomolecules by using standard methods.
CO – 3	Evaluate the chromatographic techniques in biological sample.
CO – 4	Apply various bioinformatics tools for the analysis of biological sequences
CO – 5	Analyse the technique of thin layer chromatography
CO – 6	Overview about biological macromolecular structure & structure prediction methods
CO – 7	To demonstrate the data bases tools (BLAST, FASTA)

CO NO	Course Outcomes MICROBIAL BIOTECHNOLOGY – U3CMB21
CO – 1	Understand the basic concepts of genetic engineering
CO – 2	Investigate the advanced techniques used in biotechnology
CO – 3	Apply the biotechnological principles to solve the environmental problem.
CO – 4	Explain the application of recombinant DNA technology.
CO – 5	Explain & elucidate the molecular techniques in Ti plasmid
CO – 6	Explain the techniques involved in gene manipulation
CO – 7	Acquire knowledge about medical & its allied fields.

CO NO	Course Outcomes ENVIRONMENTAL AND AGRICULTURAL MICROBIOLOGY – U3CMB23
CO – 1	make use of microbes in agriculture.
CO – 2	Analyze the soil microbe interaction
CO – 3	Summarize the classification of microorganism in soil & biogeochemical cycles.
CO – 4	Develop ecofriendly agricultural practices by using microorganisms
CO – 5	Appraise the microbial action in environment



CO – 6	Asses the quality of water
CO – 7	Understand the various bio geochemical cycle carbon, nitrogen etc..

CO NO	Course Outcomes FOOD AND DAIRY MICROBIOLOGY – U3CMB22
CO – 1	explain the food as a substrate.
CO – 2	Apply the preservation techniques for food.
CO – 3	Evaluate the microbiology of fermented milk products.
CO – 4	Analyze the role of microbes in food borne infection
CO – 5	Discuss the role of microbes in food preparation & spoilage
CO – 6	Knowledge principles & various food preparation methods
CO – 7	Develop the fermented food product by microbes in food

CO NO	Course Outcomes INDUSTRIAL MICROBIOLOGY – U3CMB24
CO – 1	Outline the types of microbial growth
CO – 2	Compare and contrast the characteristics of various antibiotic
CO – 3	Experiment with spectroscopic instruments
CO – 4	Discuss the methods involved in recovery process
CO – 5	Assess the effectiveness of vitamins, single cell proteins
CO – 6	Evaluate the microbial products
CO – 7	Illustrate the basic design in fermentor

CO NO	Course Outcomes MEDICAL LABORATORY TECHNIQUES – U3CMB25
CO – 1	Apply the microscopic skills in specimen preservation
CO – 2	Develop the knowledge on clinical laboratory

CO – 3	Evaluate the important techniques from clinical sample
CO – 4	Evaluate the steps involved in tissue processing
CO – 5	Discuss the principles of microtome
CO – 6	Analyze the importance of staining
CO – 7	Demonstrate the basic techniques in clinical sample

CO NO	Course Outcomes LAB IN FOOD AND DAIRY, AGRICULTURE & ENVIRONMENTAL MICROBIOLOGY – U3CMBL12
CO – 1	Apply the microbial production techniques in various industries
CO – 2	Find out the quality of milk by dye reductase method
CO – 3	Find the quality of water by MPN method
CO – 4	Make use of microbes in agriculture
CO – 5	Evaluate the plant microbe interaction
CO – 6	Examine the N <sub>2</sub> fixing bacteria from the given sample
CO – 7	Assess the importance of azolla cultivation

CO NO	Course Outcomes LAB IN MEDICAL LAB TECHNIQUES, MICROBIAL BIOTECHNOLOGY & INDUSTRIAL MICROBIOLOGY – U3CMBL13
CO – 1	Make use of various techniques for clinical samples
CO – 2	Identify the blood groups & its significance
CO – 3	Evaluate the microbial products
CO – 4	Discuss the importance of lipase production
CO – 5	Analyze the agarose gel electrophoresis
CO – 6	Assess the importance of yeast in alcohol production
CO – 7	Develop the procedure for isolation of plasmid DNA
CO --8	Discuss the method for the isolation & identification of yeast

CO NO	Course Outcomes PLANT TISSUE CULTURE – (SSP)
CO – 1	Entrepreneurship skill development
CO – 2	Career opportunities & job opportunities
CO – 3	They become hands on expertise in life sciences.
CO – 4	Assess the effectiveness of transgenic technology
CO – 5	Discuss the application of herbicide, pesticide
CO – 6	Utilise knowledge on development of new traits
CO – 7	Analyze the importance of organization of plant genome
CO – 8	

CO NO	Course Outcomes PROTEOMICS & PROTEIN ENGINEERING – (SSP)
CO – 1	Analyse the concepts& scope of proteomics study
CO – 2	Evaluate the proteomics tools in protein study
CO – 3	Elaborate the application of genomics & proteomics
CO – 4	Apply the various techniques involved in genomics
CO – 5	Analysis the concepts & scope of proteomics study
CO – 6	Evaluate the proteomics tools in protein study
CO – 7	Elaborate the application of genomics & proteomics

CO NO	Course Outcomes GENETIC ENGINEERING – (SSP)
CO – 1	Define the structural features of genetics
CO – 2	Apply the various techniques involved in genome sequencing.
CO – 3	Elaborate the application of genetic engineering

CO – 4	List the enzyme involved in genetic engineering
CO – 5	Explain the principles of gene cloning
CO – 6	Evaluate the effectiveness of transgenic technology
CO – 7	Discuss the knowledge on the vectors in genetic engineering

CO NO	Course Outcomes AQUACULTURE – (SSP)
CO – 1	Show the importance of blue revolution
CO – 2	Create awareness of conservation of fish ponds.
CO – 3	Evaluate the need of fish culture
CO – 4	Analyze the significance of aquaculture in world
CO – 5	Analyze the production of fish & its uses
CO – 6	Develop skills on aquaculture
CO – 7	Elaborate the aqua culture & technology

CO NO	Course Outcomes MUSHROOM CULTIVATION – R4NMB1 (NME)
CO – 1	Apply the importance of fungal product
CO – 2	Develop skills on mushroom cultivation
CO – 3	Identify the harmful pathogens.
CO – 4	Classify the fungi based on taxonomy
CO – 5	Apply the techniques in role in mushroom cultivation
CO – 6	Classify the fungi based on nutritional requirements
CO – 7	Analyze the mycotoxins role in mushroom cultivation

CO NO	COURSE OUTCOMES CATERING AND FOOD PROCESSING – S4NMB2 (NME)
CO – 1	Explain the food as a substrate.
CO – 2	Apply the preservation techniques for food.
CO – 3	Evaluate the microbiology of fermented foods
CO – 4	Analyse the role of microbes in food production
CO – 5	Evaluate the microbiology of production of fermented foods.
CO – 6	Discuss the government regulatory practices in food safety
CO – 7	Elaborate the food packaging types

CO NO	Course Outcomes GENERAL BIOLOGY - P3ABG4
CO – 1	Outline the classification & their structures of cryptogames & Phanerogames.
CO – 2	Summarize the structure & functions of various systems of human
CO – 3	To know the economic importance of algae & fungi
CO – 4	Assess the importance of maintenance of homeostasis
CO – 5	Students will be able to describe the diversity of life
CO – 6	Appraise the value of human physiology
CO – 7	Recall the history of plant systematic

CO NO	Course Outcomes CELL BIOLOGY - Q3ABG4
CO – 1	Define the structure & functions of cell organelles.
CO – 2	Define the factors causing cancer
CO – 3	Be able to understand the structures & basic components of prokaryotic & eukaryotic cells
CO – 4	Explain the various stages of cell cycle.
CO – 5	Assess the importance of microscope

CO – 6 Discuss the virus pathogenesis

CO – 7 Understand the cancer biology

CO  
NO

Course Outcomes  
LAB IN GENERAL BIOLOGY AND CELL BIOLOGY - Q3ABGL3

CO – 1 Experiment with the morphological features of the plants.

CO – 2 Analyse the significance of cell division.

CO – 3 Make use of importance of biological specimens

CO – 4 Basics of microscopic

CO – 5 Identify the different staining techniques used in cytology

CO – 6 Appraise the knowledge on taxonomy & biodiversity

CO – 7 Develop skills for observing identified botanical plants

CO  
NO

Course Outcomes  
GENETICS - R3ABG4

CO – 1 Relate the mendel's laws of inheritance.

CO – 2 List the principles of inheritance & genetic inheritance

CO – 3 Apply the knowledge to study the syndromes

CO – 4 Analyse the concept of gene expression & mutation

CO – 5 Create awareness among prenatal diagnosis of genetic diseases

CO – 6 Build their knowledge on pedigree analysis, genetic counseling & eugenics

CO – 7 Identify the blood groups & the concept of sex determination

CO  
NO

Course Outcomes  
BIOSTATISTICS - S3ABG5

CO – 1 Interpret the data using correlation, regression & ANOVA

CO – 2 Apply the statistical tools to solve the research problems in biology

CO – 3	Analyze the data using measure of central tendency
CO – 4	Calculate, analyze & sampling hypothesis & compare.
CO – 5	Discuss the correlation & significance tests
CO – 6	Compute the test of significance using chi- square test
CO – 7	To know about the fundamental of statistics.

CO NO	Course Outcomes LAB IN GENETICS AND BIOSTATISTICS - S3ABGL2
CO – 1	Build their knowledge on heredity & variations.
CO – 2	recall the concepts of genetic significance.
CO – 3	Determine the measure of central tendency
CO – 4	List out the different types of syndromes.
CO – 5	Compare and verify the mendelian monohybrid & dihybrid ratio
CO – 6	Develop a knowledge on quantitative characters using coin-tossing test
CO – 7	Develop knowledge on genetics for human welfare

## DEPARTMENT OF BIOCHEMISTRY

### B.Sc Bio-Chemistry- SUBI

PO NO	Programme Outcomes
PO – 1	To apply contextual knowledge and modern tools of biochemical research for solving problems.
PO – 2	A strong understanding of fundamentals of biochemical process at advanced level
PO – 3	Capacity to identify ,analyse the experimental process to provide efficient solutions.
PO – 4	Screening of microorganisms ,storage and preservation of industrially important microbes.
PO – 5	To make aware of microscopic living system and organisms. They can work across a spectrum of private industries or government agencies.

PSO NO	Programme Specific Outcomes
PSO – 1	Acquire knowledge about clinical haematology and biochemical techniques for isolation of biomolecules.
PSO – 2	Practical work make the students skillfull ,this skill will help to design outdoor activities.
PSO – 3	Applied the fundamentals of molecular biology.The application of the course lays the foundation to understand the disease processes.
PSO – 4	To implement the use of techniques in biological research and in discovering new products.
PSO – 5	Facilitates to understand the concepts of gene cloning .They will also be help with modern techniques such as PCR technology and DNA finger printing.

CO NO	Course Outcomes BIOMOLECULES – P3CBC4
CO – 1	Gain the detail understand about the development of Biochemistry.
CO – 2	Learn the significance of storage & structural polysaccharide ,discuss its structure and function.
CO – 3	Understands the amino acid structure and its physical,electrical properties.
CO – 4	Categorize the different types of proteins and their function
CO – 5	Demonstrate the classification of fatty acids and discuss the reactions of unsaturated fatty acids (Halogenation ,saponification).
CO – 6	Understand the significance of nucleic acid acquire the knowledge about DNA and RNA. To get wide about hormones and briefly understand the sources and biological role.

CO NO	Course Outcomes ALLIED CHEMISTRY - P3ACH4
CO – 1	basic knowledge about the structure of atoms, electronic configuration , quantum numbers and photoelectric effect.
CO – 2	gain the knowledge about the Gaseous state which includes gas laws and kinetic theory of gases
CO – 3	Foundation in the concept of acids and bases and buffer solutions
CO – 4	Understanding of chemical bonding includes types of bond and theories
CO – 5	Knowledge of nuclear chemistry includes nuclear fission, nuclear fusion and radioactivity
CO – 6	Knowledge about separation and application of isotopes.
CO – 7	Acquire the knowledge about hybridization and MO theory.



CO NO	Course Outcomes GENERAL BIOLOGY - P3ABG4
CO – 1	Student can identify and classify plant groups from algae, fungi and bryophytes also understand the morphology and economic importance.
CO – 2	Students gain idea about structure and economic importance of pteridophytes, Gymnosperms and Angiospermic plants.
CO – 3	To learn the organization secretion digestion and functions of digestive system
CO – 4	Gain the knowledge of components composition and functions of blood in circulatory system
CO – 5	Understand the respiratory pigments in respiratory system.
CO – 6	Student will acquire knowledge of the organisation and functions of excretory system and endocrine gland in endocrine system
CO – 7	Understand the development of sex organs and birth control measures in reproductive system

CO NO	Course Outcomes ENZYMES AND ENZYME TECHNOLOGY – Q3CBC5
CO – 1	Reveal the basic knowledge of enzyme ,classification and its properties.
CO – 2	To enable the students to obtain their knowledge about mechanism of enzyme activity.
CO – 3	Aware the knowledge about factors affecting enzyme activity. Get a wide idea about regulation of enzyme activity.
CO – 4	Define enzyme catalysis ,types and its mechanism of action. Reveal the knowledge about isoenzyme (LDH)
CO – 5	To get a fundamental knowledge about methods of enzyme immobilization and its application in various fields.
CO – 6	Illustrate the biosensor ,types ,instrumentation and how it is applied in biological sciences ?

CO NO	Course Outcomes LAB IN BIOCHEMISTRY– Q3CBCL2
CO – 1	Estimate the analysis of carbohydrates, protein and aminoacids.
CO – 2	Know the determination of lipids by chemical reactions.
CO – 3	Separate biochemical ( casein and starch) from their natural sources.
CO – 4	To handle the instruments like PH meter and understand the preparation of buffer.
CO – 5	Understand the instrumentation and basic principle of colorimeter.
CO – 6	How will you calculate concentration of given coloured compound using a standard graph by using colorimetric method?

CO NO	Course Outcomes ALLIED CHEMISTRY - Q3ACH5
CO – 1	acquire the basic knowledge about the fundamentals of organic chemistry includes IUPAC nomenclature and classification.
CO – 2	gain the knowledge about the Isomerism includes optical isomerism and geometrical isomerism
CO – 3	Knowledge about the biological importance of natural products such as alkaloids and terpenoids
CO – 4	gain the knowledge about the heterocyclic compounds.
CO – 5	gain the knowledge of Colloids includes preparation and applications.
CO – 6	Knowledge about the calculation of empirical and molecular formula.
CO – 7	Understanding about R S Notation & E Z Configuration.

CO NO	Course Outcomes LAB IN ALLIED CHEMISTRY – I -Q3ACHL1
CO – 1	Know the Preparation standard solutions.
CO – 2	Standardize the various solutions.
CO – 3	Estimate the amount of substance present in a given solution using acidimetry and alkalimetry.
CO – 4	Knowledge about redox reactions permanganometry.
CO – 5	Knowledge about the reactions using external indicators.
CO – 6	Estimate the amount of substance using iodimetry.
CO – 7	.know theory of indicators such as Oswald theory and quinonoid theory.

CO NO	Course Outcomes METABOLISM – R3CBC5
CO – 1	Study the importance of carbohydrate metabolism ,conversion of carbohydrates into glucose and its energetics.
CO – 2	To gain the knowledge about what happens when lipids are synthesised &how the lipids convert into vitamin D ,bile acids and steroidal hormones?
CO – 3	Analyze the metabolism of aminoacids and proteins study the fate of dietary proteins .
CO – 4	Know the concepts of bioenergetics ,how and when the energy is generated?
CO – 5	Have a complete understanding about hormones, how it is classify and list out the functions of hormonesl.
CO – 6	Understand the relationship between hormones and regulation of growth.clearly understand secondary signalling.

CO NO	Course Outcomes LAB IN QUANTITATIVE ANALYSIS OF BIOMOLECULES – R3CBCL2
CO – 1	Study the principle and procedure for the analysis of carbohydrates( Anthrone ,seliwanoffs and Benedicts methods.).
CO – 2	Analyse the determination of protein by Lowrys and Biuret methods.
CO – 3	Determine the estimation of lipid ( cholesterol ) by Zak method.
CO – 4	Determine the vitamins (Ascorbic acid ) by Titrimetry and Colorimetry.
CO – 5	Know the principle and application of colorimeter.
CO – 6	To state the quantity of minerals in natural products.

#### **HUMAN DISEASE AND PREVENTION - R4NBC1 (NME)**

S.NPO	COURSE OUTCOME
CO1	Understand and explain stages of infections disease
CO2	Describe various modes by which infections spread in community
CO3	Understand and describe human body's resistance mechanism against disease
CO4	Describe and explain the reasons, classes and development of prevention of human
CO5	Understand the role of symptoms and disease control process
CO6	Understand how to educate the people about taking care of health

CO NO	Course Outcomes BLOOD BIOCHEMISTRY – (SSP)
CO – 1	Acquire knowledge about collection and storage of human specimens in clinical to future use.
CO – 2	Know the importance, diagnosis methods and differentiate the R.B.C.
CO – 3	Utilize the knowledge about the disorder disease in human.
CO – 4	Acquire knowledge about procedure, application and difficulties of blood transfusion..
CO – 5	Practice about different collection methods and materials used in diagnostics.
CO – 6	

CO NO	Course Outcomes CLINICAL BIOCHEMISTRY – S3CBC6
CO – 1	Apply appropriate technique used in clinical assays and learn the development of clinical biochemistry..
CO – 2	Understand the etiology of disorder and inborn error of carbohydrate metabolism.studt about GTT and hypertension.
CO – 3	Knowledge about the clinical studies facilitates in employability in diagnostic and research institutes.
CO – 4	A critical understanding of how biochemical investigations are employed to develop a clinical diagnosis..
CO – 5	Gain a deep understanding about diseases associated with endocrine disorders.
CO – 6	Review tissue function test and its significance. Have a deep idea about the diagnostic uses of enzymes.

CO NO	Course Outcomes LAB IN CLINICAL BIOCHEMISTRY – S3CBCL5
CO – 1	Know the Analytical methods commonly used in clinical laboratory. Determine the blood pressure.
CO – 2	Evaluate the abnormalities commonly occurred in the clinical field.
CO – 3	Perform clinical tests (urine sample ) for diagnostic purposes.
CO – 4	Identify the qualitative analysis of normal and abnormal constituents (glucose, proteins, ketone bodies ) of urine.
CO – 5	To check out the students blood constituents.
CO – 6	To gain a knowledge of analysing biochemical components( sugar ,cholesterol creatinine and total protein ) in our blood sample.

CO NO	Course Outcomes BIOPHYSICAL CHEMISTRY – S3ACH6
CO – 1	acquire the basic knowledge about Chemical kinetics that includes order and molecularity of reactions and rate of the reactions.
CO – 2	gain the knowledge about the Photochemistry includes Photochemical laws and applications.
CO – 3	will have a firm foundation in the principles and applications of spectroscopy (UV-Visible, IR, H1NMR).
CO – 4	understanding of Chemical equilibrium which includes law of mass action and Le-Chatelier principle
CO – 5	knowledge about the basic concepts in electrochemistry
CO – 6	Know about the types of electrodes and membrane potential.
CO – 7	Understanding the principle of luminescence and photosensitization.

CO NO	Course Outcomes LAB IN ANALYSIS OF ORGANIC CHEMISTRY – S3ACHL2
CO – 1	Understand the common organic chemistry reactions.
CO – 2	Detection elements such as nitrogen, sulphur and halogens
CO – 3	Analysis of the organic compounds whether aliphatic or aromatic.
CO – 4	Analysis of the compounds whether saturated or unsaturated.
CO – 5	Classification of various organic compounds based on functional groups
CO – 6	Understanding of the various colour reactions of organic compounds.
CO – 7	. Synthesis of specific organic compounds to confirm the functional groups.

CO NO	Course Outcomes BIOSTATISTICS – S3ABG5
CO – 1	Comprehend the organized well defined procedure of scientific research.
CO – 2	Adapt holistic approach toward conducting research data collection and data presentation using tables and graphs.
CO – 3	Understand the collecting raw data to changing the numerical data in research.
CO – 4	Know the application of datas in individual and more than one variables.
CO – 5	Acquire knowledge about application of probability in business, administration and research.
CO – 6	Adapt to apply the statistical approaches and techniques in biological research.

CO NO	Course Outcomes LAB IN GENETICS AND BIOSTATISTICS – S3ABGL2
CO – 1	Recognize various applications of computation knowledge in biology.
CO – 2	Practise the method and principles to apply basic statistics.
CO – 3	Know the application of appropriate statistical tools in the problem solving.
CO – 4	Practice about abnormalities of different organism in biodiversity.
CO – 5	Know the applications and detective methods of blood.
CO – 6	

#### FOOD AND NUTRITION - S4NBC2 (NME)

S.NO	COURSE OUTCOMES
CO1	Out line the line the basic classification of foods and its nutritive value
CO2	Analyze the constituents, composition and nutritional aspects of vegetables and fruits
CO3	Discuss the quality processing, storage and preservation techniques of milk and milk
CO4	Products
CO5	Explain the detection and mechanism of spoilage in foods

CO6	Evaluate the significance of next generation foods and strategies to combat nutritional problems
CO7	Analyze the constituents, composition and nutritional aspects of fish , meat and poultry

CO NO	Course Outcomes MEDICINAL BIOCHEMISTRY – T3CBC18
CO – 1	The students will gain knowledge about the distribution and classification of drugs
CO – 2	Students are able to learn the drug receptors and receptor proteins
CO – 3	The learners will able to understand the different types of natural medicines.
CO – 4	Understand the details of pharmacology and pharmacognosy
CO – 5	Study about routes of drug administration and factors affecting drug metabolism
CO – 6	The students will acquire knowledge in medicinal plants and their chemical constituents and uses.
CO – 7	They will be able to identify the secondary metabolites properties isolation and applications.

CO NO	Course Outcomes MICROBIOLOGY AND IMMUNOLOGY – T3CBC15
CO – 1	Know the knowledge about origin of living organism, classification and significance of microbes. Get the idea about various method used in mushroom cultivation and nutrional value of mushroom.
CO – 2	Explain the various Nutritional methods and techniques to identify the Bacteria. Analyze the different instrumentation method used to kill the microbes.
CO – 3	Understand the nutrition and growth of microbes in different environmental condition
CO – 4	Know the Industrial application of microbes and production of value added materials.
CO – 5	Catagorize the different microbes used in milk to production of products.
CO – 6	Know the disease against the production of antibodies, and their reaction and detection of different diseased condition.

CO NO	Course Outcomes BIOTECHNIQUES – T3CBC16
CO – 1	The students will learn about chromatographic techniques
CO – 2	Students will enable to electrophoresis techniques like PAGE, SDS-PAGE.

CO – 3	To study the principle procedure and application of paper, cellulose and pulse field gel electrophoresis.
CO – 4	They will be enlightened about the principle instrumentation procedure and applications of chromatographic techniques.
CO – 5	Students have a clear knowledge of spectroscopic techniques.
CO – 6	The learner will have the ability to understand the radioisotopes.
CO – 7	Gain the knowledge of measurement of radioactivity and applications of radioisotopes in biological sciences.

S.NO	COURSE OUTCOMES
<b>MOLECULAR BIOLOGY – T3CBC17</b>	
CO1	Understand and explain the origin of bio molecules
CO2	Realize knowledge about the transposable elements types of plasmids and its applications
CO3	Learn about the organization of genetic materials in organisms
CO4	Know about the mechanisms DNA replication, transcription, and translation processes in organisms
CO5	Know about the inhibitors drugs mechanisms DNA replication, transcription and translation processes in organism
CO6	Gain knowledge in the mechanisms of gene expression and its regulation in organisms
CO7	Know about prokaryotic replication and mechanisms

CO NO	Course Outcomes LAB IN MICROBIOLOGY AND MEDICINAL BIOCHEMISTRY – T3CBCL9
CO – 1	Know the techniques of microbiology
CO – 2	Understand the sterilization methods
CO – 3	They can identify the microbes by serial dilution techniques
CO – 4	Understand the different culture media and pure culture techniques
CO – 5	Know the phases of growth curve by turbidometry method
CO – 6	Study the medicinal plant extracts using disc with sensitivity test



CO – 7 Gain the role of mushroom preparation techniques and antibiotic sensitivity test

O NO	Course Outcomes LAB IN IMMUNOLOGY AND BIOTECHNIQUES – T3CBCL10
CO – 1	Know the knowledge about basis composition of human blood and differentiate the structure of blood cells.
CO – 2	Explain the principle in RBC and WBC count by haemocytometer .Analyse , interpret the results.
CO – 3	Learn about what is immunoassay and do the assay technique for various diagnostics.To get a wide area about the diagnosis of typhoid fever by widal test.
CO – 4	Acquire knowledge about how will you separate and identify the lipids or carbohydrates by TLC.
CO – 5	Categorize the different components of blood and evaluate the RBC sedimentation rate by Westergren method..
CO – 6	Know the principle and application of paper chromatography and separate ,identify the amino acid mixture by Ascending method. How will you separate the cell organelle by centrifugation ? Understand the principle and instrumentation .

CO NO	Course Outcomes MUSHROOM CULTIVATION – R4NMB1 (NME)
CO – 1	Understand to differentiate the harmful and harmless microbes in diversity.
CO – 2	Know the general classification and nutritive value of different fungi.
CO – 3	Practise and cultivate the different edible mushroom in all climatic conditions.
CO – 4	Identify the nutritive values and different cultivable methods used to cultivation.
CO – 5	Acquire knowledge about aenteroprurnership quality with low cost.
CO – 6	Practise to compare the different species of mushroom based on cultivation.

CO NO	Course Outcomes NUTRITION AND DIETETICS – U3CBC21
CO – 1	Knowledge about classification, chemical composition and importance of different nutrients and water molecules.
CO – 2	Understand the physiological and biological factors influencing the basal metabolic rate in human beings.

CO – 3	Illustrate the importance of balanced diet in different stages and different diseased condition.
CO – 4	Recognise the different diet in different diseased condition in hospital management.
CO – 5	Demonstrate the preparation and production of various GMO products
CO – 6	Analyze the chemicals used in food preservation and additives method

CO NO	Course Outcomes PLANT BIOCHEMISTRY – U3CBC18
CO – 1	Students will acquire knowledge about photosynthetic pigments and mechanism of photosynthesis
CO – 2	Students learn the respiration process and mechanism of respiration
CO – 3	They will be able to factors affecting photosynthesis and respiration
CO – 4	Know the biosynthesis occurrence and mechanism of plant hormones.
CO – 5	Study about nitrogen fixation process..
CO – 6	The learners will able to understand the physiology of flowering
CO – 7	To understand the fundamentals of plant tissue culture techniques.

CO NO	Course Outcomes HERBAL DRUG TECHNOLOGY – U3CBC17
CO – 1	Students gain the knowledge about herbs and nutrition
CO – 2	Study about herbal drugs for various diseases
CO – 3	Gain the knowledge of drug evaluation
CO – 4	Know about the herbal drug formulations.
CO – 5	Understand the knowledge of value added products
CO – 6	Gain the knowledge of herbal medicines like chooranam, thylam, Legiyam and tincture preparations.
CO – 7	The students will learn about Drug toxicity.

CO NO	Course Outcomes GENETIC ENGINEERING AND INDUSTRIAL BIOTECHNOLOGY – U3CBC19
CO – 1	Utilize the knowledge about production of cloning vectors and their application in different fields.
CO – 2	Know the improvement and production to transfer the desired DNA and applications.
CO – 3	Analyze the mass culture of beneficial microbes.
CO – 4	Understand the preparation and storage of cDNA for future use.
CO – 5	Identification and detection of diseases and suspects in the field of criminology
CO – 6	Know the implications of law in research.

S.NO	COURSE OUTCOMES BIOINFORMATICS – U3CBC20
CO1	Basic understanding of computers and programming languages.
CO2	Gain basic knowledge on Bioinformatics.
CO3	Obtain knowledge on bio molecules
CO4	Obtaining in-depth information on biological databases.
CO5	Assimilate knowledge on genome and structure databases
CO6	Understanding the methodologies used for database searching and determining the accuracies of databases search
CO7	Determine the protein function from sequence and subsequently testing the accuracy of predicted structures

CO NO	Course Outcomes LAB IN BIOTECHNOLOGY AND BIOINFORMATICS – U3CBCL8
CO – 1	Perform bioprotocols by employ their practical training.
CO – 2	Understand the biological role of DNA and learn the isolation , quantitation and quality assessment of bacteria DNA.

CO – 3	Illustrate the screening of DNA by Agarose gel electrophoresis.
CO – 4	Recognise how the proteins should be separated and identified through SDS-PAGE .
CO – 5	Demonstrate the structure ,and applications of plasmid.
CO – 6	Analyze the isolation and quality assessment of plasmid DNA. Retrieving DNA and Protein sequences from biological databases. Using informatics tools in conducting research.

CO NO	Course Outcomes LAB IN HERBAL DRUG TECHNOLOGY – U3CBCL9
CO – 1	Know about the herbal medicines and value added products
CO – 2	To study the various secondary metabolites
CO – 3	Gain idea about analysis of alkaloids from various medicinal plants
CO – 4	Understand to isolate, analyze active compound from herbal plants
CO – 5	Gain knowledge about uses of herbal plants
CO – 6	The learners gain knowledge about flavonoids, saponinn and glycoside preparations
CO – 7	Know the concept and terminology and preparation storage methods of herbal products

CO NO	Course Outcomes ORGANIC FARMING – (SSP)
CO – 1	Explain the quality, preparation of natural compost in to using different techniques.
CO – 2	Understand the principles and role of microbes in bioremediation to protect environment.
CO – 3	Practise about Zero budget forming to prepared natural fertilizer, and pest trapping plants.
CO – 4	Acquire knowledge about microbes are used as a natural fertulizers.
CO – 5	Utilize the method and knowledge about the production of natural manure and production of organic products.
CO – 6	Analyze the uses of warms in soil fertility.

**DEPARTMENT OF COMPUTER SCIENCE**

**B.Sc COMPUTER SCIENCE - SUCS**

CO NO	Course Outcomes DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION – P3CCS5
CO – 1	To learn about the various types of number systems.
CO – 2	To enable students to construct Karnaugh maps.
CO – 3	To learn about the Multiplexers and Encoders.
CO – 4	To analyze Flip-Flops and shift registers.
CO – 5	To learn about functional units of the computer system.
CO – 6	To understand the concept of stack and queue.
CO – 7	To learn about the various types of addressing modes.
CO – 8	To analyze Direct Memory Access.
CO – 9	To determine the architecture of the microprocessor
CO – 10	To understand 8085 microprocessor programming modes, pin-function architecture.

CO NO	Course Outcomes PROGRAMMING IN C-P3CCS4
CO – 1	To understand the structure programming concepts, constants, variable, and data types.
CO – 2	To analyze the operators and expressions.
CO – 3	To learn the conditional statements and loops.
CO – 4	To understand and apply the concept of array and user defined functions.
CO – 5	To analyze the usage of structure, union, pointers and make them to efficiently access the memory.
CO – 6	To understand and evaluate the file operation and dynamic memory allocation.

CO NO	Course Outcomes STATISTICS - P3ACS3
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CO – 1	To learn about the curve fitting and principles of least squares.
CO – 2	Find out the equation of curve fitting and second degree parapola.
CO – 3	Definition of correlation.
CO – 4	Create the rank correlation using formula.
CO – 5	To learn about the two line of regression.
CO – 6	Demonstrate the knowledge of probability.
CO – 7	To understand the concept of conditional probability.
CO – 8	Knowledge of probability and the standard statistical distribution.
CO – 9	To learn about the some distribution to solve the problem.
CO – 10	To understand the commodity and price relative.
CO – 11	To create the conversion of Chain Based Index number to Fixed Based Index Number.

CO NO	Course Outcomes LAB IN PROGRAMMING IN C - P3CCSL4
CO – 1	To remember the basic data types, operators and to write simple program using them.
CO – 2	To understand the conditional statements and loops for creating programs.
CO – 3	To apply the concept of arrays functions and design applications of programs.
CO – 4	To analyze the usage of structures, pointers.
CO – 5	To evaluate the file operations.
CO – 6	To write programs to use file concept.

CO NO	Course Outcomes LAB IN VISUAL BASIC - P3CCSL3
CO – 1	To understand visual basic application.
CO – 2	To implement programs using variable, data type and control structures.
CO – 3	To analyze use the picture box control, text box control, and flex control.

CO – 4 Create and using color palette; and file operation.

CO – 5 Understand the process of using data control visual basic programming.

CO NO	Course Outcomes OPERATING SYSTEM CONCEPTS – Q3CCS7
CO – 1	To make the computer system convenient to use in an efficient manner.
CO – 2	To hide the details of the hardware resources from the user.
CO – 3	To provide users a convenient interface to use the computer system.
CO – 4	To provide efficient and file sharing of resources among users and programs.
CO – 5	To aim of Central Processing Unit scheduling is to make the system efficient fast and fair.
CO – 6	To increase system performance in accordance with the chosen set of criteria.
CO – 7	To develop a description of deadlocks, which prevent sets of concurrent processes from completing their tasks.
CO – 8	The ability to move process around in memory without it affecting its execution.
CO – 9	To allow address space that are larger than the physical address space.
CO – 10	It provides Input Output support for a variety of storage device types.

CO NO	Course Outcomes OBJECT ORIENTED PROGRAMMING WITH C++ - Q3CCS6
CO – 1	To learn about the basic concept of object oriented programming.
CO – 2	To learn about the tokens, keywords, identifiers, and constants.
CO – 3	To analyze function prototyping, call by reference, return by reference.
CO – 4	To create Math library functions.
CO – 5	To learn about the C++ program with class, nesting of member functions.
CO – 6	To learn constructor with default argument.
CO – 7	To understand operator overloading and type conversions.
CO – 8	To learn about types of an inheritance.

CO – 9	To learn about pointers.
CO – 10	To determine formatted and unformatted console I/O operations.
CO – 11	To know about classes for file operations.

CO NO	Course Outcomes DISCRETE MATHEMATICS - Q3ACS4
CO – 1	Definition of set functions.
CO – 2	To apply set symbols and types of set.
CO – 3	To create Venn diagram.
CO – 4	To learn about the connectives of true/false statement.
CO – 5	Create the truth table using statements.
CO – 6	To learn about the types of lattices and prove the theorem.
CO – 7	Definition of Boolean algebra.
CO – 8	Develop the pentagon diagram.
CO – 9	To learn about the types matrices.
CO – 10	To find the value of matrices and Left Hand Side, Right Hand Side
CO – 11	Apply the language features including Finite Automata and Non-Finite Automata
CO – 12	Using the state table and state diagram.
CO – 13	Create language accepted by Finite Automata and Non-Finite Automata.

CO NO	Course Outcomes LAB IN C++ PROGRAMMING - Q3CCSL3
CO – 1	To implement inheritance – multiple, multi level, hybrid, and hierarchical inheritance
CO – 2	To implement operator overloading and function overloading
CO – 3	To create constructor and destructor.



CO – 4	To execute friend function.
CO – 5	To demonstrate matrix addition and multiplication using operator overloading.
CO – 6	To implement classes and object.
CO – 7	To process library maintenance using file concept.

CO NO	Course Outcomes LAB IN LINUX - Q3CCSL5
CO – 1	To implement attributes of a given file
CO – 2	To find the number of users who have logged.
CO – 3	To execute various string operations.
CO – 4	To execute the comparison of files.
CO – 5	To learn about communication command.

CO NO	Course Outcomes DATA STRUCTURES - R3CCS8
CO – 1	To learn operator, iteration, functions, strings, and files.
CO – 2	To implement new and delete operator arrays.
CO – 3	To learn a point class, this pointer, line class.
CO – 4	To execute Fibonacci series, binomial co-efficient, towers of Hanoi, mutual recursion.
CO – 5	To learn stack, applications of stack, link implementation.
CO – 6	To learn queues, application of queues, linked implementation.
CO – 7	To implement list operation.

CO NO	Course Outcomes PROGRAMMING IN .NET-R3CCS9
CO – 1	Demonstrate the knowledge of object oriented concepts.
CO – 2	To learn .Net framework overview.
CO – 3	To know the languages in .Net.
CO – 4	To understand the concept of Data types and Operators.
CO – 5	To enable the concept of database.
CO – 6	To analyze the features of ADO.NET.
CO – 7	To analyze ASP.NET classes and application.
CO – 8	To learn web form fundamentals.
CO – 9	To enable validation and rich controls.
CO – 10	To learn data list, data grid and repeaters.

CO NO	Course Outcomes NUMERICAL METHODS – R3ACS5
CO – 1	To express to compute solution of simultaneous linear algebraic equations.
CO – 2	To identify to understanding the direct method and indirect method.
CO – 3	To learn about each method using formula and tabulation.
CO – 4	To find out the value of function.
CO – 5	To learn about the fundamental of differential equation and integration.
CO – 6	Explain the method of tailor series method and Euler method.
CO – 7	To create the tabulation.
CO – 8	To express various type of iterative method.
CO – 9	To develop the iteration using decimal places.

CO NO	Course Outcomes LAB IN DATA STRUCTURE IMPLEMENTATION IN C++ - R3CCSL5
CO – 1	To create a program to add, delete, in single linked list, double linked list, circular linked list.
CO – 2	To create stack using pointer.
CO – 3	To implement queue using pointer.
CO – 4	To know linear searching and binary searching.
CO – 5	To implement various tree traversal using pointer.
CO – 6	To perform sorting techniques of numbers, character value and string.

CO NO	Course Outcomes LAB IN .NET TECHNOLOGIES – R3CCSL8
CO – 1	To perform various string operation.
CO – 2	To implement classes, methods and properties.
CO – 3	To execute the program for exception handling.
CO – 4	To know about array.
CO – 5	To learn ASP.NET application.
CO – 6	Program using overriding, constructors in inheritance.

CO NO	Course Outcomes WEB TECHNOLOGIES – R4NCS1 (NME)
CO – 1	Non major students to appear in our department and study our major paper.
CO – 2	To enable the students explain the importance of internet and web designing.
CO – 3	To become familiar with internet, HTML, DHTML, and XML.
CO – 4	To know the idea about HTML tags.
CO – 5	How to create a simple web design.

CO NO	Course Outcomes DATA BASE MANAGEMENT SYSTEM – S3CCS11
CO – 1	To learn about the characteristics of data in a database.
CO – 2	To enable students to understand the various types of data base models.
CO – 3	To enable students to construct E-R model.
CO – 4	To learn about the various normalization form.
CO – 5	To learn about the various types of database users.
CO – 6	To understand transaction properties and various transaction states.
CO – 7	To learn about the different causes of failures.
CO – 8	To enable the students to understand client/server architecture, functions of distributed DBMS.
CO – 9	To learn about the benefits of parallel processing and parallel databases.
CO – 10	To learn about the mobile database processing.

CO NO	Course Outcomes JAVA PROGRAMMING - S3CCS10
CO – 1	To Understand basic concepts of Object Oriented Programming and Java Programming Constructs like constants, variables, and operators.
CO – 2	To Understand the concepts of control statements.
CO – 3	To Understand the concepts of classes, objects, method overloading, inheritance, arrays, strings and vectors.
CO – 4	To Interpret in detail Interfaces in Java.
CO – 5	To build applications using Packages.
CO – 6	To Understand the need the concepts of multi threading by using thread class and implementing Runnable interface.
CO – 7	To Understand the concepts of errors and exceptions, keywords that are used to manage Exceptions.
CO – 8	Understand the concept of applets by how to create and run applets and Graphics programming by various classes in the graphics class.
CO – 9	Implement the basic needs of Graphics Programming.

CO – 10	To develop real time applications.
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CO NO	Course Outcomes OPERATION RESEARCH - S3ACS5
CO – 1	Express the complete formulation of LPP as a general mathematical model.
CO – 2	Solve the LPP by graphical method, simplex method.
CO – 3	To identify the disadvantage of big M method over two phase method.
CO – 4	To learn the conversion of unbalanced problem in to balanced one.
CO – 5	Gives mathematical formulation of a transportation problem.
CO – 6	To state the difference between transportation model and assign model.
CO – 7	Explains the steps of Hungarian method.
CO – 8	To understands travelling salesman problem and lists its objectives.
CO – 9	To understand the game theory and mention the area of business and management where game theory can be used.
CO – 10	Explain the terms pay off matrix, pure and mixed strategies, dominance property.
CO – 11	To construct a PERT network and finds the critical path.
CO – 12	Distinguishes between CPM and PERT.

CO NO	Course Outcomes LAB IN ORACLE PROGRAMMING – S3CCSL7
CO – 1	To understand the various definition languages.(DDL,DML)
CO – 2	To enable students to understand various set operators.
CO – 3	To understand the concept of triggers.
CO – 4	To learn the concept of functions.
CO – 5	To know the concept of procedures.
CO – 6	To learn the concept of packages.

CO – 7	To learn about the various joining operations.
CO – 8	To learn about E-R model design.
CO – 9	To understand various numeric function.
CO –10	To understand various group functions.
CO – 11	To learn about implicit and explicit cursor.
CO – 12	To enable student to understand the concept of report generation.

CO NO	Course Outcomes LAB IN JAVA PROGRAMMING – S3CCSL8
CO – 1	To explain simple Object Oriented Programs using Java.
CO – 2	To Perform Arrays and Flow Control Statement.
CO – 3	To explain Run Time Exception and I/O Exception.
CO – 4	To describe Multithreading.
CO – 5	To inspect the usage of string operations.
CO – 6	To analyze about Java Packages.
CO – 7	To examine Java Interface
CO – 8	To create GUI component like Label, Check box, Menus and Text.
CO – 9	To implement event handling like Focus, Key, Paint, Text, Mouse and Windows
CO – 10	To interpret about Java Applet and Java Data Base Connectivity

CO NO	Course Outcomes ORACLE - S4NCS2 (NME)
CO – 1	Non major students to appear in our department and study our major paper.
CO – 2	Enable students to understand various definition language.
CO – 3	To learn about sorting operations.

CO – 4	To understand about group functions, list functions.
CO – 5	To learn about the ROLLBACK command, COMMIT command.
CO-6	To learn about the date arithmetic.

CO NO	Course Outcomes COMPUTER NETWORKS – T3CCS15
CO – 1	To know about the uses of computer networks
CO – 2	To identify different components of network hardware software.
CO – 3	Enumerate the layers of the OSI/TCP/IP.
CO – 4	Ability to understand the different transmission, narrowband ISDN, broadband ISDN, Cellular radio.
CO – 5	To know the data link layer concepts, error detection, correction, elementary data link layer protocol, sliding window protocol.
CO – 6	Ability to understand the routing algorithms, transport layer concepts.
CO – 7	Analyse the application layer, network layer, network security, E-mail, WWW.

CO NO	Course Outcomes WEB TECHNOLOGIES – T3CCS16
CO – 1	To enable the students explain the importance of internet and web designing.
CO – 2	To become familiar with internet, HTML, DHTML, XML.
CO – 3	To understand the introduction to the internet.
CO – 4	To learn internet technologies.
CO – 5	To know about internet browsers, internet explorer.

CO NO	Course Outcomes J2EE – T3CCS17
CO – 1	To know the features of J2EE Platform and its application domains and technologies.

CO – 2	To develop applications with JSP and Servlet.
CO – 3	To create applications using database connectivity.
CO – 4	To Understand in detail JavaScript various Objects.
CO – 5	To recall in detail JSP Reading Request Information
CO – 6	To describe JSP Components, JSP Sessions and JSP Cookies
CO – 7	To Inspect Handling servlet get request, servlet Post request and servlet Cookies
CO – 8	To Create servlet database Connectivity.
CO – 9	Implement EJB's Session and Entity Bean.
CO – 10	Interpret Session Bean State Management Modes and Entity Bean Life Cycle.

CO NO	Course Outcomes MULTIMEDIA – T3ECS2
CO – 1	To learn and understand multimedia, resources of multimedia.
CO – 2	To understand hardware, software, and operating system.
CO – 3	Ability to understand the graphics and digital audio.
CO – 4	To know the concept of digital video and animation.
CO – 5	To analyze the operation of authoring tools.
CO – 6	Ability to understand the flash 5.0

CO NO	Course Outcomes LAB IN MULTIMEDIA – T3CCSL13
CO – 1	To implement easy picture animation.



CO – 2	Demonstrate the image rotation.
CO – 3	Applying the shape tweening effect, motion tweening effect.
CO – 4	To implement different text effect.
CO – 5	To analyze the zooming effect.
CO – 6	To learnt the various photo editing features and animation techniques.
CO – 7	To identify the basic tools and components of multimedia

CO NO	Course Outcomes LAB IN WEB TECHNOLOGIES– T3CCSL12
CO – 1	To learn and implement the scripting languages, design and develop the programs for web-sites.
CO – 2	To display an image as a hyperlink.
CO – 3	To learn simple JSP program to static, dynamic inclusion.
CO – 4	To introduce the concept of HTML in all the heading levels.
CO – 5	To knowledge understanding JSP program form handling

CO NO	Course Outcomes PHP (HYPER TEXT PREPROCESSOR) – U3CCS20
CO – 1	To introduce a scripting languages.
CO – 2	To study about php conditions, branches, loops, functions and user defined functions.
CO – 3	To implement arrays, strings and advanced data manipulation.
CO – 4	To introduce object oriented programming with php.
CO – 5	To understand the concept of inheritance.
CO – 6	Compare with SQL and MySQL.
CO – 7	To create, insert, update, delete the databases.
CO – 8	To examine the php validation with java script.
CO – 9	To analyze the session management.

CO – 10	To create form based HTTP authentication.
CO – 11	To learn about Error, debugging, and deploying reporting of php.

CO NO	Course Outcomes PYTHON AND R PROGRAMMING – U3CCS18
CO – 1	To remember the principles of structured programming and to understand basics of python.
CO – 2	To understand the common programming idioms: variables, loop, branch, subroutine, and input/output
CO – 3	To deploy the concepts of functions, standard libraries, modular programming and the design of user interfaces
CO – 4	To figure out ability to analyze and solve the problems using advanced facilities of the Python Language
CO – 5	To evaluate the object oriented features in python using functions and standard libraries.
CO – 6	To learn how to design and program python applications.
CO – 7	To learn how to use tuples, list and dictionaries in python programs.
CO – 8	To import external data into R for data processing and statistical analysis
CO – 9	To learn the main R data structures – vector and data frame.
CO – 10	To compute basic summary statistics

CO NO	Course Outcomes SOFTWARE ENGINEERING – U3CCS19
CO – 1	To produce the software product.
CO – 2	To produce reliable and trust worthy systems economically and quickly.
CO – 3	The project planning is a process is establishing all necessary documentation and structuring all your future activities.
CO – 4	To analyze software cost factors.
CO – 5	To estimate software maintenance cost.
CO – 6	To provide software required specification.
CO – 7	To analyze language and process for require specification.

CO – 8	To identify software design.
CO – 9	To analyze Different kinds of software based usages
CO – 10	To implement verification is the process of evaluating product.
CO – 11	To preserve the value of software over the time.

CO NO	Course Outcomes MOBILE COMPUTING – U3ECS5
CO – 1	Demonstrate the basic skills of cellular network design.
CO – 2	Apply the knowledge of mobile and wireless network.
CO – 3	To learn multiple access procedure.
CO – 4	To learn GSM (Global System for Mobile Communication) and GSM architecture.
CO – 5	To enable wireless transmission technology.
CO – 6	To analyze the features of blue tooth.
CO – 7	To understand the development of WATM (Wireless Asynchronous Transmission Mode).
CO – 8	To analyze the Goals of mobile IP.
CO – 9	To enable wireless mark-up language script.
CO – 10	To learn the architectures of wireless application protocol.

CO NO	Course Outcomes LAB IN PHP (HYPERTEXT PREPROCESSOR) – U3CCSL12
CO – 1	To understand PHP conditions and branches.
CO – 2	To learn arrays and regular expressions.
CO – 3	To inspect classes, objects and inheritance
CO – 4	To analyze MySQL command interpreter.
CO – 5	To study about the web databases.

CO – 6	To view validation and error reporting.
CO – 7	To monitor session management.
CO – 8	To provide authentication and security.
CO – 9	To afford error, debugging and deploying.
CO – 10	To examine reporting.

CO NO	Course Outcomes LAB INPYTHON AND R PROGRAMMING– U3CCSL14
CO – 1	To perform basic operators using python
CO – 2	To implement conditional statements using python
CO – 3	To know about mathematical functions using python.
CO – 4	To learn string functions
CO – 5	To perform list using python
CO – 6	To perform tuples using python
CO – 7	To perform dictionaries using python
CO – 8	To analyze data and time method using python

### **M. Sc COMPUTER SCIENCE - SPCS**

CO NO	Course Outcomes MATHEMATICAL FOUNDATIONS - P6CCS12
CO – 1	To learn about the logical operators.
CO – 2	Introduce concepts of mathematical logic for analyzing propositions.
CO – 3	Introduce the concepts of mathematical groups for analyzing definition and proving theorems.

CO – 4	To learn about the various groups.
CO – 5	Introduce the basic concepts of types of lattices for proving theorem.
CO – 6	Create the switching circuits.
CO – 7	To learn the conversion of unbalanced problem into balanced one.
CO – 8	Explain how the problem of transportation problem.
CO – 9	To learn about the game theory, solve the game using LP method.
CO – 10	To understand the game theory, where game theory can be used.

CO NO	Course Outcomes ADVANCED OPERATING SYSTEMS - P6CCS9
CO – 1	To analyze the process synchronization means sharing system resources by processors.
CO – 2	To hide the location of its process and resource
CO – 3	To analyze distributed mutual exclusion
CO – 4	To identify the distributed deadlock detection.
CO – 5	To implement control organization
CO – 6	To analyze distributed resource management
CO – 7	To estimate distributed share memory.
CO – 8	To identify distributed scheduling.
CO – 9	To preserve the design issues
CO – 10	To analyze the process scheduling and memory management
CO – 11	To analyze concurrency control and distributed database system
CO – 12	To evaluate the concurrency control algorithm

CO NO	Course Outcomes RELATIONAL DATABASE MANAGEMENT SYSTEM-P6CCS11
CO – 1	Explain about Types of Database Management Systems
CO – 2	Implement various Models like Hierarchical, Network and Relational.
CO – 3	To describe about Object Oriented Model and Object Relational Model
CO – 4	To recall the concept of various Normalization.
CO – 5	To interpret the basics of database, SQL, PL/SQL, forms and reports.
CO – 6	To utilize tables and execute different SQL queries.
CO – 7	To analyze the various PL/SQL concepts.
CO – 8	To evaluate interactive PL/SQL blocks, forms and reports
CO – 9	To develop real time database applications
CO – 10	To Interpret in detail about Cursors, Triggers, Procedures and Functions

CO NO	Course Outcomes PROGRAMMING IN C and C++ - P6CCS10
CO – 1	To understand the basic structure, data types, operators, and various control statements.
CO – 2	To analyze the arrays, pointers, functions, structures and unions.
CO – 3	To understand evaluate the file operations.
CO – 4	To understand the input and output operations.
CO – 5	To know the network programming.
CO - 6	To learn about classes and objet
CO – 7	To know the application of object oriented
CO – 8	To learn about the function in c++
CO – 9	To define constructor and destructor

CO – 10	To understand operator overloading type conversion
CO – 11	To enable inheritance extending classes
CO – 12	To know about pointers, virtual functions and polymorphism

CO NO	Course Outcomes LAB IN C AND C++ PROGRAMMING - P6CCSL4
CO – 1	To implement programs using input and output statements.
CO – 2	Programs using control, and conditional statements.
CO – 3	To create a program using files.
CO – 4	To create programs using various data structures, arrays using pointers.
CO – 5	To create graphics programs.
CO – 6	To understand and implement the redesigning keys.
CO – 7	To create menus with shortcut and interactivity.
CO – 8	To create cursors of various shapes.
CO – 10	To display texting, different orientation and forms.
CO – 11	To create any icon.
CO – 12	To implement the object oriented concepts.
CO - 13	To implement operator overloading

CO NO	Course Outcomes LAB IN ORACLE - P6CCSL5
CO – 1	Creating tables for different application using DDL.
CO – 2	To perform all DML functions.
CO – 3	To performing DCL functions.

CO – 4	To solve queries and functions.
CO – 5	To set operations (union, union all, intersect, and minus).
CO – 6	To solve join concepts.
CO – 7	To creating tables with integration constraints and domain.
CO – 8	To enable tables with security.
CO – 10	To creating data base objective using queries.
CO – 11	To create PL/SQL block using all the control statements.
CO – 12	To creating procedures, functions, packages, triggers for different applications.

CO NO	Course Outcomes COMPUTER NETWORKS – P6ECS2
CO – 1	To know about the uses of computer networks
CO – 2	To identify different components of network hardware software.
CO – 3	Enumerate the layers of the OSI/TCP/IP.
CO – 4	Ability to understand the different transmission, narrowband ISDN, broadband ISDN, Cellular radio.
CO – 5	To know the data link layer concepts, error detection, correction, elementary data link layer protocol, sliding window protocol.
CO – 6	Ability to understand the routing algorithms, transport layer concepts.
CO – 7	Analyse the application layer, network layer, network security, E-mail, WWW.

CO NO	Course Outcomes DATA STRUCTURES USING C++ - Q6CCS11
CO – 1	To learn about operators, encapsulation, abstract and classes and object
CO – 2	To understand the concept of class hierarchy, polymorphism and their categories.
CO – 3	To discuss about data structure operation and algorithm.
CO – 4	To implement the concept of arrays.



CO – 5	To understand the sort operation.
CO – 6	To analyze the various searching concepts.
CO – 7	Ability to understand linked list.
CO – 8	To learn about stacks, queues and recursion.
CO – 9	To discuss the about trees and graphics.

CO NO	Course Outcomes ADVANCED JAVA PROGRAMMING - Q6CCS12
CO – 1	Interpret basic concepts of Object Oriented Programming and Java Programming Constructs like constants, variables, operators and the concepts of control statements
CO – 2	Develop the concepts of classes, objects, method overloading, inheritance, arrays, strings and vectors and Interfaces in Java
CO – 3	Build applications using Packages
CO – 4	Create the need the concepts of multi threading by using thread class and implementing runnable interface
CO – 5	Interpret the concepts of errors and exceptions, keywords that are used to manage Exceptions.
CO – 6	Design the concept of applets by how to create and run applets and Graphics programming by various classes in the graphics class.
CO – 7	Describe JSP Components, JSP Sessions and JSP Cookies
CO – 8	Inspect Handling Servlet get request, Servlet Post request and Servlet Cookies.
CO – 9	Create Servlet database Connectivity

CO NO	Course Outcomes NETWORK SECURITY - Q6CCS13
CO – 1	To learn the types of attacks.
CO – 2	To enable students to understand various cryptography techniques.
CO – 3	To learn about the DES method.
CO – 4	To learn about the AES method.
CO – 5	To learn about the RSA algorithm.

CO – 6	To learn about the digital signatures.
CO – 7	To enable students to understand the concept of secure socket layer (SSL).
CO – 8	To learn about the wireless application protocol (WAP).
CO – 9	To learn about the VPN (Virtual Private Network).
CO – 10	To learn about the Denial of service (DOS).

CO NO	Course Outcomes SOFTWARE ENGINEERING-Q6CCS14
CO – 1	To understand the software process and software process model.
CO – 2	To estimate the systematic approach to the development, operation, maintenance.
CO – 3	To analyze the computer based system.
CO – 4	To implement system modeling.
CO – 5	To encompasses the task that go into determining the needs or condition.
CO – 6	To implement building analysis model.
CO – 7	To analyze the design objectives are the functional and non-functional qualities of a design.
CO – 8	To transform the design model into functional software.
CO – 9	To identify the user interface design is to make the users interaction as simple and efficient as possible.
CO – 10	To evaluate work products such as requirements, design, user stories and code.

CO NO	Course Outcome LAB IN DATA STRUCTURES USING C++ - Q6CCSL5
CO - 1	To create a program to add, delete, in single linked list, double linked list, circular linked list.
CO - 2	To create stack using pointer.
CO – 3	To implement queue using pointer.
CO – 4	To know linear searching and binary searching.

CO – 5	To implement various tree traversal using pointer.
CO – 6	To perform sorting techniques of numbers, character value and string.

CO NO	Course Outcomes LAB IN ADVANCED JAVA PROGRAMMING – Q6CCSL3
CO – 1	To explain simple Object Oriented Programs using Java.
CO – 2	To Perform Arrays and Flow Control Statement.
CO – 3	To explain Run Time Exception and I/O Exception.
CO – 4	To describe Multithreading.
CO – 5	To inspect the usage of string operations.
CO – 6	To analyze about Java Packages.
CO – 7	To examine Java Interface
CO – 8	To create GUI component like Label, Check box, Menus and Text.
CO – 9	To implement event handling like Focus, Key, Paint, Text, Mouse and Windows
CO – 10	To interpret about Java Applet and Java Data Base Connectivity

CO NO	Course Outcomes AUTOMATA THEORY - Q6ECS4
CO – 1	To learn about strings, alphabet, language of a computer system.
CO – 2	To define the four classes of grammar.
CO – 3	To introduce the concepts of FA and DFA for analyzing state table and state diagrams.
CO – 4	To create the conversion of NDFSA to DFSA.
CO – 5	To prove the properties of languages, grammars and automata with rigorously formal mathematical methods.
CO – 6	To design automata regular grammars accepting certain language.
CO – 7	To explain and manipulate the different concept in automata theory and formal languages such as formal proofs.

CO – 8	To transform between equivalent deterministic and non deterministic finite automata theory and regular expression.
CO – 9	To explain the power and the limitations of regular languages and context free languages.
CO – 10	To describe language accepted by an automata or generated by a CFG, regular expression.

CO NO	Course Outcomes COMPILER DESIGN-R6CCS19
CO – 1	To Summarize the basic operations of a compiler.
CO – 2	Make use of parsing techniques for traversing program statement
CO – 3	To Examine the representation of grammar and intermediate code
CO – 4	Appraise the code optimization techniques
CO – 5	To Design the steps for constructing a compiler with necessary tools
CO – 6	To Describe in detail about the parsing technique.
CO – 7	To Discuss with examples LR, SLR and LALR Parsing Technique
CO – 8	To Interpret with examples various types of notations , quadruples, triples and postfix translations
CO – 9	To Discuss error detection and error recovery.
CO – 10	Assess source of optimization and loop optimization

CO NO	Course Outcomes WEB DESIGNING - R6CCS22
CO – 1	To understand DHTML and HTML
CO – 2	To analyze XML and DTD.
CO – 3	To learn JavaScript and VBScript.
CO – 4	To enable cookies concepts.
CO – 5	To understand data types and operators control statements arrays

CO – 6	To analyze ADO and ADO.Net
CO – 7	To know about ASP .Net applications.
CO – 8	To learn about perform fundamentals.
CO – 9	To understand data list data grid and repeater.

CO NO	Course Outcomes DIGITAL IMAGE PROCESSING-R6CCS20
CO – 1	To understand the need for image transform and their properties.
CO – 2	To learn fundamental steps in DLP (Digital Light Processing).
CO – 3	To enable light and the electromagnetic spectrum.
CO – 4	To analyze the linear and non-linear operations.
CO – 5	To develop any image processing application and process.
CO – 6	To understand spatial enhancement methods.
CO – 7	To understand the rapid advances in machine vision techniques.
CO – 8	To learn color image processing.
CO – 9	To learn different techniques for the enhancement of image compression.
CO – 10	To learn elements of information theory.

CO NO	Course Outcomes DATA ANALYTICS - R6CCS21
CO – 1	To understand data mining and its functionality.
CO – 2	To learn data CRISP - DM.
CO – 3	To enable data from data cleaning.
CO – 4	To analyze data handling missing data
CO – 5	To learn transforming categorical variable into numerical valuable.

CO – 6	To enable dimension – reduction methods.
CO – 7	To understand applying factor analysis to the adult data set.
CO – 8	To enable classification.
CO – 9	To learn clustering.
CO – 10	To enable kohonor network.
CO – 11	To learn about association rules

CO NO	Course Outcomes LAB IN LINUX PROGRAMMING – R6CCSL5
CO – 1	To implement attributes of a given file
CO – 2	To find the number of users who have logged.
CO – 3	To execute various string operations.
CO – 4	To execute the comparison of files.
CO – 5	To learn about communication command.
CO – 6	To create and append a file.

CO NO	Course Outcomes LAB IN WEB DESIGN AND .NET TECHNOLOGIES – R6CCSL8
CO – 1	To perform various string operation.
CO – 2	To implement classes, methods and properties.
CO – 3	To execute the program for exception handling.
CO – 4	To know about array.
CO – 5	To learn ASP.NET application.

CO – 6	Program using overriding, constructors in inheritance.
CO – 7	To implement HTML program that displays and image as a hyperlink.
CO – 8	To create XML and Cascading Style Sheet document for the tag.
CO – 9	To format the document with an XSL style sheet

CO NO	Course Outcomes LAB IN DIGITAL IMAGE PROCESSING USING MAT – R6CCSL7
CO – 1	It is designed to give students a basic understanding of MAT LAB including popular tool box.
CO – 2	To give interactive lectures and sample MAT LAB problems.
CO – 3	Give the operation to implement problem.
CO – 4	To learn compression technique.
CO-5	To analyze various image performance.
CO-6	To execute retrieving images.

CO NO	Course Outcomes SOFT COMPUTING - R6ECS6 (NME)
CO – 1	To understand the neural network and basic models of artificial neural network.
CO – 2	To learn hebb network.
CO – 3	To enable supervised learning network.
CO – 4	To determine training algorithm for pattern association.
CO – 5	To learn about organise feature maps.
CO – 6	To enable adaptive resonance theory network.
CO – 7	To learn fuzzy logic, fuzzy relations, and membership functions.
CO – 8	To develop a defuzzification and fuzzy arithmetic and fuzzy measures

CO NO	Course Outcomes PHP - HYPERTEXT PREPROCESSOR - S6CCS4
CO – 1	To understand PHP conditions and branches.
CO – 2	To learn arrays and regular expressions.
CO – 3	To inspect classes, objects and inheritance
CO – 4	To analyze MySQL command interpreter.
CO – 5	To study about the web databases.
CO – 6	To view validation and error reporting.
CO – 7	To monitor session management.
CO – 8	To provide authentication and security.
CO – 9	To afford error, debugging and deploying.
CO – 10	To examine reporting.

CO NO	Course Outcomes CLOUD COMPUTING – S6CCS3
CO – 1	To learn about introduction to cloud computing.
CO – 2	To understand the cloud based services and applications
CO – 3	To learn about deployment and management service.
CO – 4	To discover hadoop and map reduce job execution.
CO – 5	To enable students to understand the application design and development in python.
CO – 6	To find Django and their applications.
CO – 7	To learn big data architecture and the cloud security.
CO – 8	To understand data security and key management.



CO NO	Course Outcomes LAB IN PHP - S6CCSL1
CO – 1	To understand PHP conditions and branches.
CO – 2	To learn arrays and regular expressions.
CO – 3	To inspect classes, objects and inheritance
CO – 4	To analyze MySQL command interpreter.
CO – 5	To study about the web databases.
CO – 6	To view validation and error reporting.
CO – 7	To monitor session management.
CO – 8	To provide authentication and security.
CO – 9	To afford error, debugging and deploying.
CO – 10	To examine reporting.

CO NO	Course Outcomes PROJECT VIVA – VOCE - S6ECSP
CO – 1	Students must spend at least three months (90 days) in industry, attendance certificate is must.
CO – 2	Project confirmation letter is send to the department within a month.
CO – 3	Three internal viva-voce will be arranged, students may attend any two but the final internal viva-voce is must.
CO – 4	Students can do the project at home institution also.

## DEPARTMENT OF INFORMATION TECHNOLOGY

### B.Sc INFORMATION TECHNOLOGY - SUIT

PO NO	Programme Outcomes
PO – 1	The knowledge of computing in IT Industry.
PO – 2	The Graduates can glow in the areas such as Web Designing, Database Management, Networking and Digital Marketing.
PO – 3	Apply Communication and Technology Skills effectively in multidisciplinary. Engage them to use the

	current Technology and Software tools.
PO – 4	Execute the Database Activity and handle the Queries related to the User needs.
PO – 5	Attitude is created to integrate the IT Solution such as Analysis, Design, System development and Implementation.

PSO NO	Programme Specific Outcomes
PSO – 1	Convert their Innovative Ideas into Software Solutions.
PSO – 2	Enrich their Communication and Technology Skill.
PSO – 3	They can endeavor as Programmer, Web Developer, System Analyst, Project Manager and Mobile Application Developer.
PSO – 4	Can become an Entrepreneur and commence a Company.
PSO – 5	Innovate new ideas and solutions to Real time Problems.

CO NO	Course Outcomes PRINCIPLES OF INFORMATION TECHNOLOGY – P3CIT4
CO – 1	Understand the basic components of Computer system & classification.
CO – 2	Gain knowledge about loaders, linkers and Algorithms.
CO – 3	Apply and use MS-WORD packages.
CO – 4	Work with MS-EXCEL and formatting Worksheets.
CO – 5	Design Power point presentation and connect MS.ACCESS

CO NO	Course Outcomes PROGRAMMING IN C – P3CIT5
CO – 1	Understand the concept of basic Program Structure, data types and Operators.
CO – 2	Analyze looping statements and Decision Making.
CO – 3	Implement arrays and strings.
CO – 4	Apply the concept of Functions, Structures and Unions.

CO – 5	Learn about pointers and I/O Operation of Files.
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CO NO	Course Outcomes DIGITAL PRINCIPLES – P3AIT4
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CO – 1	Manipulate the number system, Binary, Decimal, Octal and Hexadecimal.
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CO – 2	Illustrate the logic gates and Universal Gates.
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CO – 3	Construct the Boolean algebra and Karnaugh Map.
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CO – 4	Understand the concept of adder, subtractor and register.
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CO – 5	Acquire knowledge on Counters and Register.
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CO NO	Course Outcomes LAB IN OFFICE APPLICATION – P3CITL3
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CO – 1	Creating Tables, various Documents,
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CO – 2	Perform Mail merge Operations.
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CO – 3	Worksheet Manipulation using Formulas.
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CO – 4	Creating PowerPoint Slides in MS – POWERPOINT
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CO – 5	Connecting MS Access DataBase
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CO NO	Course Outcomes LAB IN PROGRAMMING IN C - P3CITL4
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CO – 1	Develop programs using Operators and Datatypes.
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CO – 2	Handle Decision making and looping statements.
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CO – 3	Implementing arrays and string concepts
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CO – 4	Implementing functions and structures
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CO – 5	Implementing files.
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CO NO	Course Outcomes PROGRAMMING IN C++ – Q3CIT7
CO – 1	Read and understand the concept of Object oriented in C++.
CO – 2	Apply conditional and control Statements.
CO – 3	Analyze constructor, destructor and Overloading concepts.
CO – 4	Use various types of Inheritance.
CO – 5	Apply File concept in C++ program.

CO NO	Course Outcomes UNIX – Q3CIT8
CO – 1	Getting knowledge about Unix commands.
CO – 2	Handling files and directories.
CO – 3	Discuss about Basic File Attributes.
CO – 4	Develop program using Vi-editors
CO – 5	Explain various process and filters.

CO NO	Course Outcomes STATISTICS –Q3AIT5
CO – 1	Measures of central tendency value
CO – 2	Measures of Dispersion
CO – 3	Find variation between the variables using correlation and regression.
CO – 4	Understand Regression Analysis
CO – 5	Comparing values using index numbers.

CO NO	Course Outcomes LAB IN PROGRAMMING IN C++– Q3CITL4
CO – 1	Develop program in OOPs based concepts.
CO – 2	Implement inheritance concepts.
CO – 3	Implementing Constructors & Destructors
CO – 4	Implementing Operator overloading and function overloading
CO – 5	Create, open , close using files

CO NO	Course Outcomes LAB IN UNIX– Q3CITL5
CO – 1	Implement basic Unix commands.
CO – 2	Implementing Directory commands.
CO – 3	Implementing Filter commands
CO – 4	Developing the program using vi Editors
CO – 5	Create program for shell programming.

CO NO	Course Outcomes DATA BASE MANAGEMENT SYSTEM – R3CIT8
CO – 1	Understand about types of database, services, SDLC and DDLC.
CO – 2	Analyze ER-Diagram and normalization concepts.
CO – 3	Explain relational algebra and relational calculus.
CO – 4	Create tables, views and indexes.
CO – 5	Implement the concept of Trigger, Cursor and analyze the concept of backup and recovery.

CO NO	Course Outcomes COMPUTER ORGANIZATION – R3CIT9
CO – 1	Learn the types of gates and flip-flops and simplifying arithmetic and logic micro operations.
CO – 2	Explain basic computer organization and Instruction.
CO – 3	Analyze various types of organization and pipeline.

CO – 4	Develop algorithm for addition, Subtraction, multiplication and division.
CO – 5	Describe about memory and its types and interconnected structure.

CO NO	Course Outcomes FINANCIAL AND MANAGEMENT ACCOUNTING – R3AIT5
CO – 1	Prepare prospective managers with a skill to understand the basic principles of Financial and Management Accounting.
CO – 2	Utilize accounting information in solving the business problems and taking scientific decisions.
CO – 3	Cost data helps to analyze and ascertain the cost of product and how to develop targets.
CO – 4	Preparing Fund flow &Cash flow statements
CO – 5	Explain financial tools and techniques which can be used to help firms maximize value by improving decisions relating budget.

CO NO	Course Outcomes LAB IN ORACLE– R3CITL4
CO – 1	Develop DDL, DML and DCL Commands.
CO – 2	Create Tables, Views.
CO – 3	Implement cursor and Triggers.
CO – 4	Apply Join concepts.
CO – 5	Develop PL/SQL programs.

CO NO	Course Outcomes LAB IN TALLY– R3AITL4
CO – 1	Creation and maintenance of company ledgers.
CO – 2	Preparation of fund and cash flow statements.
CO – 3	Preparation of Budget
CO – 4	Analyzing Accounts and reporting
CO – 5	Preparation of Cast Category summary

CO NO	Course Outcomes WEB TECHNOLOGY – S3CIT9
CO – 1	Understand the concept of web essential, client, server and XHTML.
CO – 2	Implement style sheet using CSS, JavaScript.
CO – 3	Acquire knowledge on DOM and java servlets.
CO – 4	Explain XML documents and JSP.
CO – 5	Creating java web services and databases.

CO NO	Course Outcomes JAVA PROGRAMMING – S3CIT10
CO – 1	Gain the knowledge of object oriented programming.
CO – 2	Create classes and objects.
CO – 3	Implement inheritance and polymorphism.
CO – 4	Develop applet programming and AWT.
CO – 5	Explain various database connections and connect database to java application. Understand the basic concept of networks.

CO NO	Course Outcomes OPERATIONAL RESEARCH – S3AIT6
CO – 1	Convert problems into mathematical model
CO – 2	Solve Transportation Problems
CO – 3	Solve Assignment & Travelling Salesman Problems
CO – 4	Understand the usage of Game Theory
CO – 5	Formulate and solve problems as Networks and Graphs

CO NO	Course Outcomes LAB IN WEB TECHNOLOGY – S3CITL7
CO – 1	Develop web page using basic html tags.
CO – 2	Developing web page using Audio and Video tags
CO – 3	Displaying the images in webpage
CO – 4	Create a website using forms and frames.
CO – 5	Manipulate a program using scripting Languages.

CO NO	Course Outcomes LAB IN JAVA PROGRAMMING– S3CITL6
CO – 1	Develop a program for method and Constructor overloading.
CO – 2	Implement the concept of inheritance, Interface and packages.
CO – 3	Implementing the concept of interface and packages.
CO – 4	Implementing Exception handling functions
CO – 5	Design applet windows.

CO NO	Course Outcomes COMPUTER GRAPHICS – T3CIT15
CO – 1	Understand the application of computer graphics, display devices, input and output devices.
CO – 2	Handling character generations and bundled attributes.
CO – 3	Apply 2d transformation techniques. Perform various clipping algorithms.
CO – 4	Explain different color models.
CO – 5	Design of animation sequence and functions.



CO NO	Course Outcomes SOFTWARE ENGINEERING – T3CIT16
CO – 1	Understand the software engineering terms and planning of software project.
CO – 2	Estimate various COST models.
CO – 3	Analyze software requirements and designs.
CO – 4	Handling verification and validation techniques.
CO – 5	Implementing testing and debugging.

CO NO	Course Outcomes DATA STRUCTURE – T3CIT17
CO – 1	Understand the basic concepts and algorithmic notations.
CO – 2	Implementing strings and arrays.
CO – 3	Illustrate about linked list and memory allocation.
CO – 4	Handling Stacks and Queues.
CO – 5	Discuss about trees.

CO NO	Course Outcomes VB.NET – T3CIT18
CO – 1	Understand the .Net framework, datatype, operators and console application.
CO – 2	Implement control statements and arrays.
CO – 3	Work with procedure and structures, message boxes and File concepts.
CO – 4	Create and handle menus, dialog boxes and OOPs.
CO – 5	Connect database and handle ADO.NET.

CO NO	Course Outcomes MULTIMEDIA – T3EIT7
CO – 1	Explain the concepts of multimedia and computer architecture.
CO – 2	Illustrate text and graphics.
CO – 3	Manage digital audios and videos.
CO – 4	Work with product design and authoring tools.
CO – 5	Gain the concept of web page development and browsers.

CO NO	Course Outcomes LAB IN DATA STRUCTURE– T3CITL8
CO – 1	Develop the program for linear array.
CO – 2	Implement PUSH, POP operations using stack.
CO – 3	Implement Insertion, Deletion using Linked List.
CO – 4	Implementation of Circular queue
CO – 5	Demonstrate a Tree structure.

CO NO	Course Outcomes LAB IN VB.NET – T3CITL9
CO – 1	Develop programs for console applications.
CO – 2	Create programs for Windows applications.
CO – 3	Developing programs using constructors, class events
CO – 4	Developing programs using windows form controls
CO – 5	Connect VB.NET application with database.

CO NO	Course Outcomes COMPUTER NETWORK– U3CIT18
CO – 1	Illustrate about network architecture and OSI models.
CO – 2	Explain various Topologies.
CO – 3	Discuss network layers and routing algorithms.
CO – 4	Analyze transport layer.
CO – 5	Establishing presentation layer and cryptographic algorithms.

CO NO	Course Outcomes OPERATING SYSTEM– U3CIT19
CO – 1	Understanding the basic types of OS and system structure.
CO – 2	Analyze various scheduling algorithms.
CO – 3	Apply various concept of synchronization, deadlock.
CO – 4	Handling memory management and file system interface.
CO – 5	Managing I/O systems and MASS storage system.

CO NO	Course Outcomes PROGRAMMING IN PHP – U3CIT20
CO – 1	Understand the fundamental of PHP, data types and operators.
CO – 2	Explain conditional and control statements.
CO – 3	Handling GET and POST methods and files
CO – 4	Create session and cookies.
CO – 5	Connect PHP with MYSQL database.

CO NO	Course Outcomes PROGRAMMING IN PYTHON – U3EIT5
CO – 1	Learn Expression, Statement and Condition.
CO – 2	Define functions, strings and looping.
CO – 3	Storing data in Files, Lists and Dictionaries
CO – 4	Create Tuple and use tuple key in dictionaries.
CO – 5	Developing Network program with web services.

CO NO	Course Outcomes LAB PROGRAMMING IN PHP – U3CITL2
CO – 1	Develop program using PHP looping statements.
CO – 2	Implement PHP library functions.
CO – 3	Create program using session and cookies.
CO – 4	Creating applications using PHP
CO – 5	Connect front end application with mysql database.

CO NO	Course Outcomes LAB PROGRAMMING IN PYTHON – U3EITL3
CO – 1	Develop program for List type.
CO – 2	Creating programs using functions
CO – 3	Creating programs using Arrays
CO – 4	Creating programs using tuples
CO – 5	Creating programs using Dictionaries

CO NO	Course Outcomes PROJECT– U3EITP
CO – 1	Creating a platform to demonstrate students practical competence
CO – 2	Encouraging students to apply their subject knowledge gained in the degree course.
CO – 3	Sharpening students intellectual qualities like Programming skills, analytical abilities, Communication skills
CO – 4	Developing skills on Testing, Debugging and report generation.
CO – 5	Preparing students for their Professional world.

### M.Sc INFORMATION TECHNOLOGY - SPIT

PO NO	Programme Outcomes
PO – 1	Use and apply current technical concepts and practices in the core information technologies of Networking, Data management, Software engineering, Computer security.
PO – 2	Demonstrate a deep understanding of the IT methodologies and frameworks.
PO – 3	Effectively integrate IT – based solutions into the user environment.
PO – 4	Develop and implement optimal solutions to complex computing problems using industry-recognized best practices and standards.
PO – 5	Apply ethical decision making in the development, implementation and management of IT systems

PSO NO	Programme Specific Outcomes
PSO – 1	Understand the concept and applications like Web designing and development, Network and Communication technologies, Mobile application development
PSO – 2	Enrich Communication and Technological skills.
PSO – 3	Design, develop and test software systems for world – wide network of computers to provide solutions to real world problem.
PSO – 4	Understand the technological developments in the usage of modern design and development tools to analyse and design a variety of applications.
PSO – 5	Competent and complete software professional to meet the requirement of Corporate world and Industry Standard.

CO NO	Course Outcomes PROGRAMMING IN C – P6CIT14
CO – 1	Understanding the concept of datatype, decision making, functions and pointers.
CO – 2	Handling C preprocessor, arrays & strings
CO – 3	Manage structures and miscellaneous features.
CO – 4	Explain console I/O and file I/O concepts.
CO – 5	Design graphics and mouse programming

CO NO	Course Outcomes INTERNET PROGRAMMING – P6CIT13
CO – 1	Design web programs using HTML tags.
CO – 2	Understand the basic concepts CSS and java script.
CO – 3	Become familiar with document object model.
CO – 4	Explain the basic concepts of bootstrap.
CO – 5	Develop program using bootstrap dropdowns, navigation elements, and navigation bar.

CO NO	Course Outcomes RELATIONAL DATA BASE MANAGEMENT SYSTEM – P6CIT17
CO – 1	Understand RDBMS concepts ,database design
CO – 2	Implement and work with oracle tables.
CO – 3	Manipulate arithmetic operations, functions, joins and set operations.
CO – 4	Understand about PL/SQL, cursors and exceptions.
CO – 5	Analyze the PL/SQL procedure, packages and triggers.

CO NO	Course Outcomes OPERATING SYSTEM – P6CIT15
CO – 1	Identify the different OS structure.
CO – 2	Develop process models and compare different scheduling algorithms.
CO – 3	Justify the IPC problems in Threads.
CO – 4	Managing memory allocation and resource allocation using deadlocks.
CO – 5	Learn the multiprocessor types and its scheduling.

CO NO	Course Outcomes QUANTITATIVE METHODS – P6CIT16
CO – 1	Introduce the concept of Statistics & Classification
CO – 2	Understand Central tendency & Dispersion
CO – 3	Understand Procedure for testing of hypothesis I
CO – 4	Understand Procedure for testing of hypothesis II
CO – 5	Understand Correlation & Regression

CO NO	Course Outcomes LAB IN PROGRAMMING IN C – P6CITL6
CO – 1	Develop programs using Operators and Datatypes.
CO – 2	Handle Decision making and looping statements.
CO – 3	Implement arrays and string concepts
CO – 4	Implement functions, pointers and structures
CO – 5	Handle file concepts and graphics driver

CO NO	Course Outcomes LAB IN INTERNET PROGRAMMING – P6CITL7
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CO – 1	Create web page using HTML Tag.
CO – 2	Implement Cascading Style Sheet.
CO – 3	Validate programs using Java Script
CO – 4	Develop programs using Bootstrap
CO – 5	Develop programs using Bootstrap controls

CO NO	Course Outcomes LAB IN RDBMS– P6CITL8
CO – 1	Create different types of query
CO – 2	Writing queries and subqueries using Joins and Set Operations.
CO – 3	Implement Cursor & Exceptions.
CO – 4	Develop PL/SQL programs using Triggers
CO – 5	Develop PL/SQL programs using Procedures, Functions and Packages

CO NO	Course Outcomes PROGRAMMING IN C++– Q6CIT17
CO – 1	Introduce OOPS and its application in classes
CO – 2	Creating arrays and its reference using pointers.
CO – 3	Applying overloading concepts in functions and operators.
CO – 4	Define classes with inherited memory
CO – 5	Developing templates with generic classes and storing data in files using file streams.

CO NO	Course Outcomes DIGITALIMAGE PROCESSING – Q6CIT18
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CO – 1	Introducing elements of image processing and adapting techniques.
CO – 2	Enhancing images and point operations.
CO – 3	Applying various techniques for Biometric reorganization and remote sensing.
CO – 4	Compressing images without losing picture
CO – 5	Learn the tomography concepts.

CO NO	Course Outcomes RESOURCE MANAGEMENT TECHNIQUE – Q6CIT19
CO – 1	Convert problems into mathematical model
CO – 2	Solve Transportation Problems
CO – 3	Solve Assignment, Travelling Salesman Problems
CO – 4	Understand the usage of Game Theory
CO – 5	Formulate and solve problems as Networks and Graphs

CO NO	Course Outcomes ADVANCED JAVA – Q6CIT20
CO – 1	Understand the basics of Java programming.
CO – 2	Understanding the concepts of Interface & Packages
CO – 3	Understanding the concepts of Threads, Applets & I/O files
CO – 4	Learn the importance of networking in java.
CO – 5	Gain knowledge about JFC, JSP & Servlets.

CO NO	Course Outcomes OBJECT-ORIENTED SOFTWARE ENGINEERING – Q6EIT4
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CO – 1	Modeling the UML diagrams.
CO – 2	Analyzing the requirements.
CO – 3	Addressing the system design.
CO – 4	Managing reuse techniques and specifying object design interface.
CO – 5	Mapping models to code and managing implementation and testing.

CO NO	Course Outcomes LAB IN PROGRAMMING IN C++ – Q6CITL9
CO – 1	Handle Decision making and looping statements
CO – 2	Create program using Overloading Concepts.
CO – 3	Implement a program using Inheritance.
CO – 4	Develop program using Exceptions.
CO – 5	Create, Open, Closing File using File Operations.

CO NO	Course Outcomes LAB IN IMAGE PROCESSING – Q6CITL10
CO – 1	Create web page using HTML Tag.
CO – 2	Implement Cascading Style Sheet.
CO – 3	Create web page using Audio & Video Tag.
CO – 4	Create a website using forms and frames.
CO – 5	Develop ASP.Net Programs.

CO NO	Course Outcomes LAB IN JAVA NETWORKING – Q6CITL11
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CO – 1	Create a program using string function.
CO – 2	Design the Applet program.
CO – 3	Construct the Coding for swing concept.
CO – 4	Develop a webpage using JSP.
CO – 5	Implement RMI concept.

CO NO	Course Outcomes OPEN SOURCE WEB PROGRAMMING – R6CIT21
CO – 1	Learn the characteristic, uses of PHP, Datatype and Operators.
CO – 2	Managing types of Arrays and HTML Forms in PHP
CO – 3	Explain function, cookies and sessions.
CO – 4	Handling PHP Error and Exception, Date and Time Function.
CO – 5	Connect with PHP and Mysql, PHP and XML.

CO NO	Course Outcomes DATA STRUCTURES AND ALGORITHMS – R6CIT22
CO – 1	Introduce problem solving techniques and pointers.
CO – 2	Implementation of stack and queues.
CO – 3	Representing graph and its search techniques.
CO – 4	Defining tree structure and its traversal.
CO – 5	Analyze Algorithm and design techniques.

CO NO	Course Outcomes DATA COMMUNICATION AND NETWORKING – R6CIT23
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CO – 1	Categorize the network model and its structure.
CO – 2	Learn TCP/IP protocol suite and transmission media.
CO – 3	Detect and correct the errors in various layers
CO – 4	Connecting in LAN with routing protocol.
CO – 5	Transfer file in internet and web services

CO NO	Course Outcomes PROGRAMMING IN ASP.NET – R6CIT24
CO – 1	Explain the environment & Lifecycle of ASP.Net.
CO – 2	Manage different types of basic control, state and validator.
CO – 3	Connect Front End with Ado.Net, Web Application and perform File uploading, Ad Rotator and display calendar.
CO – 4	Create &Analyze data binding and custom controls.
CO – 5	Identify the web services and multithreading concepts.

CO NO	Course Outcomes MULTIMEDIA – R6EIT10
CO – 1	Presentation of media content and its S/W, H/W requirements.
CO – 2	Developing basic steps for processing images.
CO – 3	Transmitting audio with audio processing s/w.
CO – 4	Techniques of video editing and video.
CO – 5	Learn about Animation and Special effects.

CO NO	Course Outcomes LAB IN PHP– R6CITL10
CO – 1	Create a program using Array function.
CO – 2	Develop a program for session and cookies.
CO – 3	Manipulate the table using MySQL
CO – 4	Create application using PHP
CO – 5	Create Database with PHP and MySQL.

CO NO	Course Outcomes LAB IN DATA STRUCTURES – R6CITL11
CO – 1	Implement the concept of structure and pointers.
CO – 2	Implement the coding using Linked List.
CO – 3	Implement program for operations on stack
CO – 4	Develop program for operations on Queues
CO – 5	Develop program for operations on tree structures

CO NO	Course Outcomes LAB IN ASP.NET – R6CITL12
CO – 1	Create a web Application using basic ASP.Net Controls.
CO – 2	Develop a program using exception handling.
CO – 3	Perform various String Operations.
CO – 4	Develop program with Database connectivity using ADO
CO – 5	Develop programs with web services

CO NO	Course Outcomes CLOUD COMPUTING – S6CIT6
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CO – 1	Understanding the principles of Cloud Computing.
CO – 2	Manage Cloud Services.
CO – 3	Exploring Event Management.
CO – 4	Evaluating cloud storing and sharing files
CO – 5	Collaborating cloud via web based communication tools.

CO NO	Course Outcomes ORGANIZATIONAL BEHAVIOR – S6CIT7
CO – 1	Manage individuals and groups in organizations for maximum effectiveness.
CO – 2	Understand & manage formal organization structure.
CO – 3	Concepts of learning, motivation and personality development.
CO – 4	Understand on Job satisfaction and stress management.
CO – 5	Importance of communication and leadership.

CO NO	Course Outcomes CRYPTOGRAPHY– S6CIT8
CO – 1	Identify various attacks and models for N/W security.
CO – 2	Encrypt and Decrypt messages with classical techniques.
CO – 3	Learn various Algorithms for Encryption and Decryption.
CO – 4	Managing key Distribution and Authentication.
CO – 5	Developing system security by intrusion detection, password management and preventing threats.

CO NO	Course Outcomes PROJECT – S6CITP
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CO – 1	Choosing projects in specialized study areas to acquire and build skills in that domain.
CO – 2	Sharpening students intellectual qualities like Programming skills, analytical abilities, Communication skills
CO – 3	Providing Project Guidance and Training
CO – 4	Preparing to meet the demands in the IT industry.
CO – 5	Providing a real time exposure on the latest and trending technologies.

## DEPARTMENT OF COMPUTER APPLICATION

### BCA – SUCA

PO NO	Programme Outcomes
PO-1	The students will be ready to work effectively both as an individual and a team leader on multidisciplinary projects.
PO-2	Inculcates the ability to analyze, identify, formulate and develop computer applications using modern computing tools and techniques.
PO-3	Prepares to create innovative methodologies for solving complex-real life problems for the betterment of society.
PO-4	To integrate ethics and values in designing computer applications.
PO-5	To equip the students to meet the requirements of the corporate world and Industry standard.

PSO NO	Programme specific Outcomes
PSO-1	Start from the basics and in every semester learn each and everything about computer applications.
PSO-2	Develop programming skills, networking skills; learn applications, packages, programming languages and modern techniques of the software industry.
PSO-3	Learn programming languages such as Java, C++, .Net, PHP, etc.
PSO-4	Focuses on preparing students for roles pertaining to computer applications and software industry.
PSO-5	Gives overview of the topics in the IT industry like networking, computer graphics, web development, troubleshooting, hardware and software skills.
PSO-6	Information about various computer applications and latest development in the software industry and communication system is also provided.
PSO-7	Students will be able to know various issues, latest trends in technology development and thereby innovate new ideas and solutions to existing problems.
PSO-8	Bachelor of Computer Applications (BCA) gives a number of opportunities to individuals to go ahead and shine in their lives.
PSO-9	Students will be able to understand, analyse and develop computer programs in the areas related to algorithm, system software, web design and networking for efficient design of computer based systems.
PSO-10	A few of them are like software programmers, system and network administrator, web designer faculty for computer science and computer applications.

CO NO.	Course Outcomes PROGRAMMING IN C - P3CCA3
CO-1	Learn the basic and introduction of computer structure of C.
CO-2	Understand the concept of various control structures and looping statements
CO-3	Know arrays, arrays types, string handling functions.
CO-4	Understand user defined functions, categories of function and recursion, structures and unions.
CO-5	Know the concept of pointers, file handling, input output operations.

CO NO.	Course Outcomes DISCRETE MATHEMATICS - P3ACA3
CO-1	Students will be able to construct simple mathematical proofs and possess the ability to verify them ABET [(a, j)].
CO-2	Have substantial experience to comprehend formal logical arguments ABETS [(a, b, c)].
CO-3	Be skill full in expressing mathematical properties formally via the formal language of propositional logic and predicate logic ABET [(a)].
CO-4	Be able to specify and manipulate basic mathematical objects such as sets, functions, and relations and will also be able to verify simple mathematical properties that these objects possess ABET[ (a)].
CO-5	Acquire ability to describe computer programs (e.g. recursive functions) in a formal mathematical manner ABET [(a, c, i, j)].

CO NO.	Course Outcomes LAB PROGRAMMING IN C- P3CCAL3
CO-1	Implement the usage of variables, constants, operators, in programs.
CO-2	Develop the programs for manipulating decision making & looping constructs.
CO-3	Perform operations on functions, arrays & structures.
CO-4	Apply pointers for developing simple programs.
CO-5	Handle file for real time applications.

CO NO.	Course Outcomes LAB IN OFFICE AUTOMATION - P3CCAL4
CO-1	Use Microsoft Office programs to create personal and/or business documents following current professional and/or industry standards.
CO-2	Pursue future courses specializing in one or more of the programs.
CO-3	Apply skills and concepts for basic use of computer hardware, software, networks, and the Internet in the workplace and in future coursework as identified by the internationally accepted Internet and Computing Core (IC3) standards.



CO-4	Able to create a presentation using slides.
CO-5	Implement the formulas and calculations in MS Excel

CO NO.	Course Outcomes OBJECT ORIENTED PROGRAMMING WITH C++ - Q3CCA4
CO-1	Know the principles of OOps concepts and control structures.
CO-2	Analyze the concept of classes and objects, array, functions, constructor and destructor.
CO-3	Understand the concept of inheritance and its classifications, pointers, virtual function and polymorphism.
CO-4	Able to work with files, pointers and its manipulations.
CO-5	Know the concept of templates and exception handling.

CO NO.	Course Outcomes STATISTICS - Q3ACA5
CO-1	Calculate and interpret the correlation between two variables.
CO-2	Calculate the simple linear regression equation for a set of data.
CO-3	Employ the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient.
CO-4	Know the association between the attributes.
CO-5	Know the construction of point and interval estimators.

CO NO.	Course Outcomes LAB PROGRAMMING IN C++ - Q3CCAL5
CO-1	Understand how to write and use simple programs using functions and inline functions.
CO-2	Use classes and objects for implementing banking applications.
CO-3	Develop programs using the concept of overloading, friend functions, arrays of objects and constructors.
CO-4	Apply the concept of unary and binary operator overloading.
CO-5	Familiar with the concept related pointers, inheritance and file

CO NO.	Course Outcomes LAB IN DESKTOP PUBLISHING- Q3CCAL6
CO-1	Learn basics of desktop publishing software.
CO-2	Apply attributes of size and style to text to enhance documents.
CO-3	Import graphics, use automatic features of software efficiently.
CO-4	Create and import text.
CO-5	Use critical thinking skills to independently design and create publications.

CO NO	Course Outcomes DATABASE MANAGEMENT SYSTEM - R3CCA13
CO-1	Give an introduction about DBMS, data models, a schema, E-R diagram, relational database and benefits of databases.
CO-2	Able to design a good database using normalization, decomposition and functional dependency.
CO-3	Learn about indexes, sequences, creating and maintaining tables and user privileges.
CO-4	Understand the basic concepts of PL/SQL programming, cursors, triggers, packages, procedures, functions.
CO-5	Understand the concepts of LOB s and its types, advanced object oriented concepts.

CO NO	Course Outcomes DIGITAL PRINCIPLES AND ITS APPLICATIONS - R3ACA4
CO-1	Perform conversions among different number systems, become familiar with basic logic gate
CO-2	Understand Boolean algebra and simplify simple Boolean functions by using basic Boolean properties.
CO-3	Learn different memory structures and technologies.
CO-4	Design of combinational circuits such as MUX, DEMUX, Encoder and Decoder etc.
CO-5	Understand the design of sequential Circuits such as Flip-Flops, Registers, and Counters.

CO NO	Course Outcomes LAB IN DATABASE MANAGEMENT SYSTEM - R3CCAL7
CO-1	Understand DDL commands, Primary key & Candidate key.
CO-2	Apply various DML commands for retrieval of information.
CO-3	Perform all table join operations.
CO-4	Develop simple applications using PL/SQL Procedure.
CO-5	Implement the concepts in triggers, procedures , functions and packages.

CO NO	Course Outcomes LAB IN MULTIMEDIA - R3CCAL8
CO-1	Handle different file formats, changing the resolution, RGB color to gray-scale image and multicolor images.
CO-2	Design brochure and multilayer of images.
CO-3	Perform transformation and filtering on images.
CO-4	Create some basic operations such as painting, strokes and grouping objects.
CO-5	Animate using shapes, twining and actions.

CO NO	Course Outcomes FUNDAMENTALS OF COMPUTERS - R4NCA2 (NME)
CO-1	Students should be able to use technology ethically, safely, securely & legally.
CO-2	Discuss about Identifying and analyzing computer hardware, software and network

	components.
CO-3	Learn on Retrieve information and create reports from various sites.
CO-4	Discuss about Creating chart, effectively use the drawing toolbar and working with multiple worksheet and macros
CO-5	Discuss about powerpoint presenting shows for corporate and commercial, learn the computer viruses and webb features.

CO NO	Course Outcomes MULTIMEDIA - R3SCA4 (SSP)
CO-1	Understand the various elements of Multimedia.
CO-2	Understand the Multimedia animation and Desktop Computing.
CO-3	Learn Multimedia authoring tools and Multimedia building blocks by including Text and Sound. .
CO-4	Learn MIDI Image and Video Image, synchronization accuracy specification factors.
CO-5	Compressing audio and video using MPEG-1 and MPEG-2

CO NO	Course Outcomes PROGRAMMING IN JAVA - S3CCA11
CO-1	Understand the basic concepts of .Java, evaluation and implementation overview of java.
CO-2	Know operators and expressions, decision making and branching, looping.
CO-3	Able to understand classes and methods, array strings and vectors, interface concept instead of multiple inheritances.
CO-4	Packages of java, multithreaded programming contain synchronization, managing errors and exception handling.
CO-5	Able to perform applet programming designing HTML, graphic programming

CO NO	Course Outcomes FINANCIAL ACCOUNTING - S3ACA6
CO-1	Understand basic accounting concept.Recollect the fundamental terms, principles and elements of Financial Management, Capitalisation, Current Asset Management, and Investment Decisions
CO-2	Describe and summarize the role of principles journal,ledger and Financial Management tools in business situations
CO-3	Understand final accounts comprehend, analyze and work out problems using Financial Management tools
CO-4	Compare the methods of recording depreciation and calculate the amount of loss under insurance claim..formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of Financial Management elements and functions in business situations
CO-5	Understand the concepts of Financial Management in business organisations through self-directed learning using single and double entry systems.

CO NO	Course Outcomes LAB IN JAVA PROGRAMMING - S3CCAL8
CO-1	Familiar with the main features of the Java language.
CO-2	Understand to apply the working principles of multithreading, exception and file handling

CO-3	Understand the types of inheritance
CO-4	Learn to interpret the implementation of networking and JDBC in JAVA
CO-5	Implement packages, manipulate threads and exception handling techniques

CO NO	Course Outcomes LAB INWEB DESIGNING - S3CCAL9
CO-1	Design the web pages using hyperlinks.
CO-2	Format the document in the web pages.
CO-3	Use Frames and Framesets in their web page design.
CO-4	Manipulate tables with row span and Column span.
CO-5	Design the colourful web pages according to their creativity.

CO NO	Course Outcomes DESKTOP PUBLISHING - S4NCA4 (NME)
CO-1	Students Analyze compression techniques & file formats to determine effective ways of securing managing & Transferring data.
CO-2	Discuss about Making intelligent computer purchase decisions. effective use of toolbox docker window.
CO-3	Describe Manipulate text and graphics to create a balanced and focused layout.
CO-4	Discuss about Create, edit, and print long documents including supporting pages.
CO-5	Discuss about flash. working with Animation. Scanning & importing graphics.

CO NO	Course Outcomes SCRIPTING LANGUAGE - S3SCA5 (SSP)
CO-1	Understand the concept headsection and body section and other tags in HTML.
CO-2	Know the operators, procedures,looping,objects and cookies in VBscript.
CO-3	Discuss the expressions,functions,arrays and objects in javascript.
CO-4	Introduce ASP script and ASP objects.
CO-5	Learn advantages, components of JSP and servlets.

CO NO	Course Outcomes MAJOR CORE ( ASP .Net Programming ) - (T3CCA13)
CO-1	Understand the Microsoft .net framework and ASP.net page structure.
CO-2	Develop simple web forms using various controls and implement the concept of master page.
CO-3	Learn to separate page code from content by using code- behind page, page controls, components.
CO-4	Use Microsoft ADO.Net to access data in web applications
CO-5	Debug and Deploy ASP.NET web applications.

CO NO	Course Outcomes OPERATING SYSTEM - T3CCA12
CO-1	Understand the objectives, structure and functions of operating systems.

CO-2	Learn about the concept of processes, threads and its scheduling algorithms.
CO-3	Understand design issues in process synchronization and deadlock management.
CO-4	Know the various memory management schemes.
CO-5	Learn about file concept and I/O management in detail.

CO NO	Course Outcomes DATA STRUCTURES - T3CCA11
CO-1	Understand the basic concept of data structures, arrays and ordered lists.
CO-2	Select appropriate data structures as applied to specified problems.
CO-3	Familiarity with linked lists and its types.
CO-4	Perform operations like searching, sorting, insertion, deletion, traversal on various data structures.
CO-5	Know the concept of trees and graphs, performance and traversals of trees and graphs.

CO NO	Course Outcomes COMPUTERS GRAPHICS - T3CCA14
CO-1	Understand the Structure of Modern Computer Graphics systems.
CO-2	Understand the basic Principles of implementing computer graphics primitives.
CO-3	Familiarity with Key algorithms for modeling and rendering graphical data.
CO-4	Develop design & problem solving skills with application to Computer Graphics.
CO-5	Understand the concept of various transformations.

CO NO	Course Outcomes LAB IN ASP.NET PROGRAMMING - T3CCAL9
CO-1	Students will be able to design console, windows and web applications using ASP.Net.
CO-2	Students will be able to use ASP.Net controls in web applications.
CO-3	Examine the needs of windows form and database controls.
CO-4	Students will be able to debug and deploy ASP.Net web applications.
CO-5	Students will be able to create database driven ASP.net web applications and web services.

CO NO	Course Outcomes LAB IN ADVANCED JAVA PROGRAMMING- T3CCAL10
CO-1	Develop basic programs using control statements, Arrays, Inherited classes and Exception. identify the usage of JSP in java.
CO-2	Identify the usage of JSP in java.
CO-3	Utilize Object Serialization.
CO-4	Possess knowledge in handling Synchronization
CO-5	Evaluate the Hibernate JDBC framework .

CO NO	Course Outcomes Data Mining - T3ECA5
CO-1	Learn to fetch the data easily from large values of data.
CO-2	Understand the tools and techniques of data mining and its case studies.
CO-3	Able to apply data mining techniques in various applications and various algorithms in

	Association Rule.
CO-4	Know the architecture of the data warehouse and its applications.
CO-5	Understand the concept of clustering paradigms and web mining.

CO NO	Course Outcomes CLIENT SERVER TECHNOLOGY - ( SSP)
CO-1	Comprehend the basic concepts and components of the client-server model.
CO-2	Understand how Client-Server systems work.
CO-3	Differentiate between two-tier and three-tier architectures.
CO-4	Know the role of server ,CORBA in client server.
CO-5	Identify security and ethical issues in Client Server Computing

CO NO	Course Outcomes E-COMMERCE - ( SSP)
CO-1	Discuss the technologies supporting e-commerce, including Web services and electronic payment systems.
CO-2	Describe a utility program and system application that executes a specific task. TCP protocol determines the best way to distribute application data into packets that networks can deliver,transfer packet to receives packets from the network, and manages flow control and retransmission of dropped or garbled packets.
CO-3	Discuss about server computers, one that is connected to the internet via broadband; typically runs some sort of web server software, such as Internet Server and Explain enablers and issues in business-to-consumer e-commerce.
CO-4	Describe electronic thread is an object,person, or other entity that represents constant danger to an asset.E-commerce - Describe scenarios for B2B e-commerce, including SCM, CRM and EDI.
CO-5	Understand website design issues like building trust with users,banners ads, pop-ups, Dishonest Advertising and web based marking issues. Policy issues- policy and regulatory issues in E-commerce.

CO NO	Course Outcomes COMPUTER ORGANIZATION- T3SCA3 (SSP)
CO-1	Analyze and Design the Basic computer organization structure
CO-2	Study the concept of Central processing units,I/O, memory
CO-3	Ability to understand control unit operations.
CO-4	Know the design of basic and intermediate RISC pipelines and instructions.
CO-5	Understand the Set, data paths and way of dealing with pipeline hazards.

CO NO	Course Outcomes Programming in PHP – U3CCA13
CO-1	To understand the general concepts of PHP scripting language for the development of Internet websites.
CO-2	Understanding POST and GET in form submission.
CO-3	To understand the basic functions of MySQL database program.
CO-4	To learn the relationship between the client side and the server side scripts.

CO-5	To develop a final project using the learned techniques.
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CO NO	Course Outcomes VB.Net Programming - U3CCA12
CO-1	Understand use of C# basics, Objects and Types, Inheritance.
CO-2	To develop, implement and creating Applications with C#.
CO-3	To develop, implement, and demonstrate Component Services, Threading, and Remoting, Windows services.
CO-4	To understand and be able to explain Security in the .NET framework and Deployment in the .NET.
CO-5	To develop Assemblies and Deployment in .NET, Mobile Application Development.

CO NO	Course Outcomes COMPUTER NETWORKS - U3CCA14
CO-1	Learn OSI and TCP/IP reference models in Computer Networks.
CO-2	Understand the concept of transmission media and switching techniques.
CO-3	Know the design issues and services of all layers in detail
CO-4	Applying different encoding and decoding mechanisms involved different types of transmission media.
CO-5	Design a model network to handle various messages.

CO NO	Course Outcomes SOFTWARE ENGINEERING – U3CCA15
CO-1	Identify the basics in designing models.
CO-2	Understand and practice the various fields such as analysis, design, development, testing of Software Engineering
CO-3	Analyze software project size and cost estimation.
CO-4	Learn clarity and completeness of documentation.
CO-5	Compare the various types of software testing

CO NO	Course Outcomes LAB PROGRAMMING IN PHP - U3CCAL10
CO-1	Install and configure an Apache 2 server with PHP5 module, MySQL database and the tool PhpMyAdmin.
CO-2	Analyze the various types of array and exception handling methods.
CO-3	Create a database in phpMyAdmin Implement OOPs concepts in an application.
CO-4	Read and process data in a MySQL database.
CO-5	Design an interactive webpage with graphical techniques.

CO NO	Course Outcomes LAB PROGRAMMING IN VB.Net - U3CCAL9
CO-1	Understand the VB .NET environment and how to develop small programs.
CO-2	Develop a menu based program for text manipulation.
CO-3	Design to create user defined classes, interfaces and namespaces for developing real time

	applications.
CO-4	Understand ADO .NET and develop database applications.
CO-5	Develop the applications using Data Grid for displaying records.

CO NO	Course Outcomes SYSTEM SOFTWARE - ( SSP)
CO-1	To understand the basics of system programs like editors, compiler, assembler, linker, loader, interpreter, & debugger.
CO-2	The various concepts of assemblers & macro processor.
CO-3	The various phases of the compiler and compare its working with assembler.
CO-4	The linker & loader create an executable program from an object module created by assembler & compiler.
CO-5	Identify desktop and windows features, Use utility programs.

CO NO	Course Outcomes SOFTWARE TESTING - ( SSP)
CO-1	List a range of different software testing techniques and strategies and be able to apply specific (automated) unit testing methods to the projects.
CO-2	Distinguish characteristics of structural testing methods.
CO-3	Demonstrate the integration testing which aims to uncover interaction and compatibility problems as early as possible.
CO-4	Discuss about the functional and system testing methods.
CO-5	Demonstrate the implementation of black box and white box testing.

CO NO	Course Outcomes MOBILE COMPUTING - (SSP )
CO-1	Understand the basic concepts of wireless network
CO-2	Know the various multiplex access, GSM
CO-3	Discuss about the various wireless technologies.
CO-4	Learn about WATM, development , working group services of WATM, handover.
CO-5	Understand the goals of mobile IP, WML and WAP.

CO NO	Course Outcomes WIRELESS TECHNOLOGY - ( SSP)
CO-1	Understand fundamentals of wireless communication
CO-2	Demonstrate the basic skills for cellular network design.
CO-3	Apply knowledge of TCP/IP extensions for mobile and wireless networking.
CO-4	Compare different technologies used for wireless technologies.
CO-5	Know the ability to explain multiple access techniques for wireless communications.

### DEPARTMENT OF COMMERCE (S/F)

### B.Com (COMPUTER APPLICATION) - SUCC

PO NO	Programme Outcomes
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PO – 1	The students will be ready for employment in functional areas like accounting, taxation, banking, insurance and corporate law.
PO – 2	An attitude for working effectively and efficiently in a business environment.
PO – 3	Learners will gain knowledge of various disciplines of commerce, business, accounting, economics, and finance, auditing and marketing.
PO – 4	Self-employment confidences develop.
PO – 5	Understanding legal issue/ law relating to banking and insurance sector.

PSO NO	Programme Specific Outcomes
PSO – 1	Understand the basic concepts of the commerce, management, accounting of & economics.
PSO – 2	Analyse relationship among commerce, trade industry, services, management and administration.
PSO – 3	Perform all accounting activities and can handle type of business very well.
PSO – 4	Understand application of knowledge of commerce in business service sector industry, marketing, finance entrepreneurship development etc.
PSO – 5	Develop communication skills and computer awareness and rules of income tax act.

CO NO	Course Outcomes BUSINESS COMMUNICATION – P1CM4
CO – 1	Develop oral and written business communication skills
CO – 2	The students will be able to understand about trade enquires, & also the concept of collection letter
CO – 3	To write up the Banking insurance & agency correspondence.
CO – 4	To Describe the company secretarial correspondence.
CO – 5	To prepare application letters & business report presentations.

CO NO	Course Outcomes FINANCIAL ACCOUNTING - I – P3CCM4
CO – 1	To enable the students to get an idea vision of Accounting
CO – 2	To ensure the detailed coverage of final accounts

CO – 3	To have an idea of bill of exchange accounting
CO – 4	To apply BRS quantitative skills to help analyses and solve business problems
CO – 5	To understand the basic idea of depreciation accounting

CO	Course Outcomes
NO	DESKTOP PUBLISHING – P3CCN2
CO -1	Identify desktop publishing terminology and concepts
CO – 2	Work with basic features of Word
CO – 3	Use critical thinking skills to design and create spread sheets
CO – 4	Identify the names and functions of the power point interface
CO – 5	Examine database concepts and explore the Microsoft office Access environment

CO	Course Outcomes
NO	LAB IN DESKTOP PUBLISHING - P3CCML5
CO - 1	The students will be able to perform documentation
CO – 2	The students will be able to perform Accounting operations
CO – 3	The students will be able to perform presentation skills
CO – 4	The students will be able to perform database creation

CO	Course Outcomes
NO	FUNDAMENTALS OF COMPUTER – P3ACN2
CO - 1	Bridge the fundamental concepts of computers
CO – 2	Familiarize Operating systems, programming language, peripheral devices
CO – 3	Understand Binary, Hexadecimal and Octal number systems and their arithmetic

CO – 4	Understand the basics of digital computer
CO – 5	Analyze various cloud programming models

CO NO	Course Outcomes BUSINESS ORGANISATION – Q1CM5
CO – 1	To understand the basic concepts of Business.
CO – 2	To Equip the keen knowledge of formation of Business.
CO – 3	To Know about difference between Joint stock company and Partnership Firm.
CO – 4	To Acquire conceptual knowledge of company Management
CO – 5	To learn the Features of Co-operative Enterprise and Public Enterprise.

CO NO	Course Outcomes FINANCIAL ACCOUNTING-II – Q3CCM9
CO – 1	To recollect the basic concept and terms of the Consignment Accounting
CO – 2	To familiarize students with the accounting treatment adopted for joint venture accounts
CO – 3	To understand the basic in preparing single entry system
CO – 4	To apply the knowledge in evaluating for non-profit trading concerns
CO – 5	To understand the basic idea of fire insurance claim

CO NO	Course Outcomes E-COMMERCE AND ITS APPLICATIONS – Q3CCM11
CO - 1	Analyse the impact of E-Commerce business models.
CO – 2	Describe the infrastructure for E- Commerce.
CO – 3	Discuss legal issues and privacy in e-commerce
CO – 4	Demonstrate an understanding of the foundation and importance of E-Commerce
CO – 5	Describe internet trending relationships including Business to consumer, Business to Business

CO	Course Outcomes
NO	LAB IN HTML - Q3CCML2
CO - 1	Analyze a web page and identify its elements and attributes
CO – 2	Create web pages using XHTML and cascading style sheets
CO – 3	Develop skills in analyzing the usability of a web site
CO – 4	Be able to embed social media content in to web pages

CO	Course Outcomes
NO	C PROGRAMMING – Q3ACN5
CO – 1	Outline the concepts of procedure oriented programming
CO – 2	Identify the various control structure.
CO – 3	Classify various functions in C.
CO – 4	Evaluate the file operations
CO – 5	Discuss and solve the commercial problem.

CO	Course Outcomes
NO	LAB IN C PROGRAMMING - Q3ACML2
CO – 1	Read understand and trace the execution of programs written in C language
CO – 2	Write a C code for a given algorithm
CO – 3	Know concepts in problem solving
CO – 4	Introduces the more advanced features of the C language

CO	Course Outcomes
NO	FINANCIAL ACCOUNTING – III – R3CCM15
CO – 1	To enable the students to acquire knowledge in the preparation of regarding accounts.
CO – 2	To enable the students to understand the preparation of hire purchase and instalment purchase system.
CO – 3	To enable the students to understand the maintenance of branch accounts.

CO – 4	To enable the students to understand maintain of departmental accounts.
CO – 5	To enable the students to gain a sound knowledge on Indian accounting standards (Ind. As)

CO NO	Course Outcomes BUSINESS STATISTICS – R3CCM16
CO – 1	To outline the uses of statistics in various business areas and demonstrate data in diagrammatical and graphical representations.
CO – 2	To Evaluate the importance of statistical tools like Averages, dispersion, index nos., Time series, Correlation and Regression.
CO – 3	To compute and interpret the correlation between two variables
CO – 4	To delineate the concept of Time series and Index numbers
CO – 5	To forecast the business trends in the form of report using time series

CO NO	Course Outcomes MODERN BANKING – R3CCM18
CO – 1	To enable them to understand better customer relationship
CO – 2	To provide knowledge about deposits and types of customer
CO – 3	To aim to familiarize banking loans and advances
CO – 4	To create awareness about modern banking services like e-banking, m-banking and internet banking
CO – 5	To acquire knowledge on electronic fund transfer, e-money and core banking solutions

CO NO	Course Outcomes OPERATING SYSTEMS – R3CCN4
CO - 1	Explain the functionalities of Operating system
CO – 2	Experiment the technique of scheduling, paging, and memory allocation
CO – 3	Compare memory management techniques
CO – 4	Elaborate the mechanism of inter process communication

CO	Course Outcomes
NO	LAB IN OPERATING SYSTEM - R3CCML1
CO - 1	Experiment with Unix commands
CO – 2	Understand and execute basic commands of MS-Dos
CO – 3	Identify and understand concept of Dos commands
CO – 4	Apply concept of creating new file in MS-Dos

CO	Course Outcomes
NO	C++ PROGRAMMING – R3ACN4
CO - 1	To understand how C++ improves c with object oriented features
CO – 2	To learn how to write inline functions for efficiency and performances
CO – 3	To learn how to design C++ classes for code reuse
CO – 4	To learn the syntax and semantics of the C++ programming language
CO – 5	To learn how to design and implement generic classes with C++ templates

CO	Course Outcomes
NO	LAB IN C++ PROGRAMMING - R3ACNL4
CO - 1	Find the solution to a problem using object oriented programming concepts
CO – 2	Choose the relevant OOps concept and write programs
CO – 3	Evaluate programs and test data
CO – 4	Build data structure using C++

CO	Course Outcomes
NO	PARTNERSHIP ACCOUNTS – S3CCM17
CO – 1	To enable the student to understand the fundamentals and accounting procedure for partnership accounts.
CO – 2	To enable the student to understand the accounting treatment for administration of partners.
CO – 3	To enable the student to understand the account treatment for retirement of partners.

CO – 4	To enable the student to understand the handle the accounts relating to dissolution of partnership firm.
CO – 5	To enable to students to understand the handle the accounts relating to Piecemeal distribution cash sale to a company and amalgamation of partnership firm.

CO NO	Course Outcomes BUSINESS MATHEMATICS – S3CCM19
CO – 1	To explain the concepts of set theory, draw Venn diagrams to solve practical problems
CO – 2	To clarify the perception of commercial arithmetic using business level
CO – 3	To Experiment with the Mathematical Tools like Ratio, Proportion and Variation
CO – 4	To recognize the axioms of a system of Probability in the business level
CO – 5	To evaluate some business problems via Theoretical Distribution

CO NO	Course Outcomes SOFTWARE ENGINEERING – S3CCN5
CO - 1	Know the concepts of software engineering
CO – 2	Estimate the software costing techniques
CO – 3	Gain knowledge of various software testing methods in software development process.
CO – 4	An ability to communicate effectively with a range of audiences
CO – 5	An ability to acquire and apply new knowledge as needed using appropriate learning strategies

CO NO	Course Outcomes DATABASE MANAGEMENT SYSTEM – S3ACN5
CO - 1	Define the terminology, features, classifications and characteristics embodied in database systems.
CO – 2	Comprehend the concepts of basic database storage structure and access technique.
CO – 3	Know commercial relational database system by writing SQL using the system
CO – 4	Master the basics of SQL and construct queries using SQL
CO – 5	Master the basics of query evaluation techniques

CO NO	Course Outcomes LAB IN RDBMS - S3ACML2
CO - 1	Learn and apply Structured Query Language(SQL) for database definition and manipulation
CO – 2	Understand various transaction processing concurrency control mechanisms and database protection mechanism
CO – 3	Apply the basic concepts of Database Systems and Applications
CO – 4	Analyze and select storage and recovery techniques of database system

CO NO	Course Outcomes MODERN MARKETING – S3ECM3
CO – 1	To acquire an understanding of Fundamental concepts of Marketing.
CO – 2	To Enable the development of marketing strategies.
CO – 3	To Learn the concept on advertising and sales promotion.
CO – 4	To Analyze Marketing of physical channel of distribution.
CO – 5	To understand the Customer Relationship Marketing and Green Marketing.

CO NO	Course Outcomes INCOME TAX – I – T3CCM22
CO – 1	To introduce the basic concept of Income Tax
CO – 2	To acquire knowledge about income from salary
CO – 3	To calculate income from house property
CO – 4	To enlighten knowledge the income from business or profession
CO – 5	To provide knowledge about capital gains and income from other sources

CO	Course Outcomes
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NO	INTRODUCTION TO VB PROGRAMMING – T3CCN7
CO - 1	Explain basic concepts and definitions
CO – 2	Express constants and arithmetic operations
CO – 3	Distinguish variable and data types
CO – 4	Manage and analyze prepared project with programs
CO – 5	Interpret and report obtaining results

CO	Course Outcomes
NO	LAB IN INTRODUCTION TO VB PROGRAMMING -T3CCML1
CO - 1	To understand the standard tools in visual basic program
CO – 2	Getting practical knowledge to design a new software
CO – 3	To learn about menu creation, database controls and database connectivity
CO – 4	Understand to find the errors and correcting the errors in an executed program

CO	Course Outcomes
NO	COMPUTER NETWORKS – T3CCM21
CO - 1	Explain the use of computer networks and the significance of network security
CO – 2	Identify the functionalities and protocol of various layers in OSI reference model.
CO – 3	Distinguish between connection oriented service and connectionless services
CO – 4	Evaluate the importance routing algorithm, congestion control and domain name system.
CO – 5	Discuss the usage of IP address, electronic mail and the techniques of security.

CO	Course Outcomes
NO	COSTING – T3CCM23
CO – 1	To enable the students to get an ideal vision of costing.

CO – 2	To ensure the detailed coverage of material cost control.
CO – 3	To have an idea of labour cost control.
CO – 4	To have a vision an using process costing.
CO – 5	To ensure the students for preparing an operating cost statement.

CO NO	Course Outcomes COMPANY ACCOUNTS – T3ECM5
CO – 1	To understand the accounting procedure for issue of shares and debentures, redemption of preference shares and debentures.
CO – 2	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profits, if a company as per Companies Act 2013.
CO – 3	To Understand and Develop the skills of valuation of goodwill and shares
CO – 4	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes INCOME TAX – II – U3CCM25
CO – 1	To enabling the students to have a fair idea on set-off and carry forward of losses
CO – 2	To determine the concept of assessment of individual
CO – 3	To equip the students with thoughts and points on assessment of firms, AOP and companies
CO – 4	To determine the knowledge about income tax authorities
CO – 5	To acquire knowledge about procedure for assessment

CO NO	Course Outcomes MANAGEMENT ACCOUNTING – U3CCM23
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CO – 1	To know about the practice of management accounting concepts
CO – 2	To have a wide knowledge in practising ratio analysis.
CO – 3	To prepare cash flow analysis.
CO – 4	To get an idea about decision making while learning marginal costing.
CO – 5	To get an idea of practicing standard costing.

CO NO	Course Outcomes COMPUTERIZED ACCOUNTING – U3CCN9
CO - 1	Knowledge about Accounting terms
CO – 2	To learn computerized accounting technique
CO – 3	To understand financial accounting
CO – 4	To learn how to prepare final accounts and cost accounting
CO – 5	Knowledge regarding GST calculation

CO NO	Course Outcomes AUDITING - U3ECM6
CO – 1	Ascertain the principles of auditing and its classification.
CO – 2	Exemplify the procedure in vouching investigation and appointment of auditors.
CO – 3	Discovers new areas of auditing.
CO – 4	Gain knowledge about the basic principles of auditing and its classification.
CO – 5	Distinguish between internal check control and audit.

CO NO	Course Outcomes PRINCIPLES OF COMMERCE AND GENERAL COMMERCIAL KNOWLEDGE –I - T3SCM5 (SSP)
CO – 1	To enable the students to understand the commerce

CO – 2	To make the students understand about joint stock company
CO – 3	To enable the students to understand the office machine
CO – 4	To understand the trade and foreign trade
CO- 5	To enable the students to understand the office, office administration

### **M. Com (COMPUTER APPLICATION) (S/F) – SPCC**

PO NO	Programme Outcomes
PO – 1	Become experts in business data analysis and predict market demand.
PO – 2	Adopt the prudent, ethical financial management techniques and accounting principles for successful business operations.
PO – 3	Develop linkages with business enterprises and take up innovative business assignments.
PO – 4	Self-employment confidences develop.
PO – 5	Understanding legal issue/ law relating to banking and insurance sector.

PSO NO	Programme Specific Outcomes
PSO – 1	Develop skill in commerce and computer applications.
PSO – 2	Analyse relationship among commerce, trade industry, services, management and administration.
PSO – 3	Perform all accounting activities and can handle type of business very well.
PSO – 4	Understand application of knowledge of commerce in business service sector industry, marketing, finance entrepreneurship development etc.
PSO – 5	Become successful income tax and GST consultants and perform well in various competitive examinations like UGC.NET / SET , UPSC ,TNPSC, IBPS etc., and interview being conducted by various public and private sectors.

CO NO	Course Outcomes
	<b>ADVANCED ACCOUNTING – P6CCM14</b>

CO – 1	To understand the concepts of trading, profit and loss account and the balance sheet.
CO – 2	To Examine the concepts of Partnership accounts, construct accounts for admission, retirement / death of partners.
CO – 3	To analyse the various process of preparing accounts for non-trading organisations.
CO – 4	To identify the Approaches to social accounting, inflation Accounting and Human Resource Accounting.
CO – 5	To evaluate the Indian and International Accounting Standards and various Applicability of Accounting Standards.

CO NO	Course Outcomes FINANCIAL SERVICES – P6CCM11
CO – 1	To understand the role and function of the financial system
CO – 2	To examine the developed of money market
CO – 3	To outline the basic idea of SEBI and its role
CO – 4	To recollect the concept about structure of secondary market
CO – 5	To origin and growth of merchant banking and types of mutual fund

CO NO	Course Outcomes ADVANCED BUSINESS STATISTICS – P6CCM15
CO – 1	To apply correlation and regression analysis including, both simple and multiple correlation and regression.
CO – 2	To develop an understanding of the theory of Probability, rules of probability & probability distributions.
CO – 3	To become aware of the concepts in sampling, sampling distribution and procedure for hypothesis.
CO – 4	To appreciate the importance and application of non-parametric tests in hypothesis testing (Chi-square test).
CO – 5	To appreciate the importance and application of non-parametric tests in hypothesis testing (F-test – ANOVA One way & Two way classification model).

CO NO	Course Outcomes PRINCIPLES OF INFORMATION TECHNOLOGY - P6CCM13
CO - 1	Bridge the fundamental concepts of computers with the present level of knowledge of the students
CO – 2	Familiarise operating systems, programming languages, peripheral devices, networking and internet
CO – 3	Understand Binary, Hexadecimal and Octal number systems and their arithmetic
CO – 4	Describe the important computer system resources and the role of operating system in their management policies and algorithms
CO – 5	Use Microsoft Office programs to create personal, academic and business documents

CO NO	Course Outcomes LAB IN PRINCIPLES OF INFORMATION TECHNOLOGY – P6CCML3
CO - 1	Acquire practical knowledge of working with menus of windows
CO – 2	Knowledge about create and edit MS-Office and MS-Excel
CO – 3	Acquiring practical knowledge of mathematical function and analysis
CO – 4	Import and Export data from other sources

CO NO	Course Outcomes HUMAN RESOURCE MANAGEMENT – P6ECM4
CO – 1	To introduce the concept of Human Resource management and Personnel Management, Evolution and Development of HRM.
CO – 2	To gain knowledge on the various aspects of Human Resource Planning i.e. Recruitment and Selection process, Placement and Induction.
CO – 3	To gain insight of in to the various sub system of HR, Training and Development Performance Appraisal, MBO Approach.
CO – 4	To learn the components Wages and Salary Administration and benefit Practices in Organization.
CO – 5	To familiarize with the labor relation and collective bargaining, national commission of labor.

CO NO	Course Outcomes OPERATIONS RESEARCH – Q6CCM16
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CO – 1	Explain the applications & methodology employed in operations research & prepare solution to linear programming problems.
CO – 2	To be able to build and solve Transportation & Assignment problems using appropriate method.
CO – 3	Apply Queuing theory to solve business related problems.
CO – 4	To be able to design & solve simple models of CPM/PERT.
CO – 5	Enables to take best course of action out of several alternative courses for the purpose of achieving objectives by applying game theory.

CO NO	Course Outcomes RESEARCH METHODOLOGY – Q6CCM17
CO – 1	To introduce the concept of research and research methodology.
CO – 2	To enable to students to understand the sampling.
CO – 3	To make students understand about collection of data.
CO – 4	To enable the students to understand the hypothesis.
CO – 5	To enable the students to write the research report.

CO NO	Course Outcomes ACCOUNTING FOR BUSINESS DECISIONS – Q6CCM19
CO – 1	To have developed an fundamental concepts of management accounting
CO – 2	To have a wide knowledge in practicing financial statements and ratio analysis
CO – 3	To prepare the cash flow analysis
CO – 4	To get an idea about decision making while learning about marginal costing and standard costing
CO – 5	To have developed skills in budgetary analysis

CO	Course Outcomes
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NO	C AND C++ PROGRAMMING – Q6CCM20
CO - 1	Design, implement, test, debug programs in C and C++
CO – 2	Program with pointers and arrays, perform pointer arithmetic
CO – 3	Understand how to write and use function, implement function calls and parameter passing options
CO – 4	Use classes, constructors, destructors, inheritance, and operator overloading in C++
CO – 5	Map an object-oriented program design into the class and template model of C++

CO	Course Outcomes
NO	LAB IN C AND C++ PROGRAMMING - Q6CCML3
CO - 1	Student understanding the knowledge of C and C++
CO - 2	Student able to understand logical program knowledge
CO - 3	Development of application program
CO - 4	Student able to understand mathematical function
CO - 5	C and C++ source code operate to machine code

CO	Course Outcomes
NO	ORGANISATIONAL BEHAVIOUR – Q6ECM5
CO – 1	To Understanding the Organizational behaviour theory and Approaches.
CO – 2	To aware of the concept in motivation, morale and conflict management.
CO – 3	To explore the group and group dynamics in the Organizational life.
CO – 4	To learn the components about the role of stress management
CO – 5	To comprehend the change management as it functions in the Organizational behaviour.

CO	Course Outcomes
NO	CORPORATE ACCOUNTING – R6CCM24
CO – 1	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profit, if a company as per



	Companies Act 2013
CO – 2	To Understand and Develop the skills of valuation of goodwill and shares
CO – 3	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 4	To acquire knowledge on Holding Company as per Companies Act – 2013
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes DIRECT TAXES – R6CCM25
CO – 1	To introduce the basic concept of Income Tax and income computation disclosure standards
CO – 2	To calculate the taxable income under different heads
CO – 3	To acquire knowledge about profits and gains from business or profession, Capital gains and other sources
CO – 4	To enabling the students to have a fair idea on set-off and carry forward of losses and assessment of individuals
CO – 5	To provide knowledge about assessment of firms and companies

CO NO	Course Outcomes VISUAL BASIC .NET – R6CCM26
CO - 1	Students will understand .NET framework and describe some of the major enhancements to the new version of Visual Basic
CO – 2	Students will describe the basic structure of a Visual Basic .NET project and use main features of the integrated development environment(IDE)
CO – 3	Students will create applications using Microsoft Windows Forms
CO – 4	Students will create applications that use ADO .NET

CO NO	Course Outcomes LAB IN VISUAL BASIC .NET - R6CCML4
CO - 1	Understand VB .Net environment

CO - 2	Understand about structure of VB .Net and futures of IDE
CO - 3	Handle controls in form (.Net tools)
CO - 4	Advance controls in VBV .Net
CO - 5	Students will be able to develop VB .Net controls

CO	Course Outcomes
NO	COMPUTERIZED ACCOUNTING – R6ECM8
CO - 1	To learn computerized accounting technique
CO – 2	To understand financial accounting
CO – 3	Processing a variety of accounting transactions
CO – 4	Converting a manual accounting system to a computer based system
CO – 5	Prepare Financial statements on the completion of the accounting cycle in a timely fashion

CO	Course Outcomes
NO	LAB IN COMPUTERISED ACCOUNTING - R6ECML5
CO - 1	Understand Accounting principles and create company
CO - 2	Knowledge about create journal ledger and altering process
CO - 3	Student able to understand vouchers and prepare trail balance
CO - 4	Student knowledge about making inventories and stock maintenance
CO - 5	Student to process skill and can be employed as tally entry operator

CO	Course Outcomes
NO	APPLIED COSTING –R6CCM22
CO – 1	To enable the students to acquire the knowledge of job costing, batch and contract costing.
CO – 2	To provide the detained awareness about service costing.
CO – 3	To ensure the knowledge of using process costing.

CO – 4	To have a complete idea about tenders and quotations.
CO – 5	To familiarize the concepts of cost control, cost reduction and cost audit.

CO NO	Course Outcomes BUSINESS ORGANISATION AND MANAGEMENT– R6SCM1 (SSP)
CO – 1	To understand the basic concepts of Business.
CO – 2	To Equip the keen knowledge of formation of Business.
CO – 3	To Know about difference between Joint stock company and Partnership Firm.
CO – 4	To Acquire conceptual knowledge of company Management
CO – 5	To learn the Features of Co-operative Enterprise and Public Enterprise.

CO NO	Course Outcomes INDIRECT TAXES – S6CCM22
CO – 1	To make the students understand the different features of indirect tax law
CO – 2	To acquire knowledge the GST
CO – 3	To determine the GST input tax credit and GST audit
CO – 4	To enlighten knowledge the procedures and special provision under GST
CO – 5	To understand the Customs Act 1962

CO NO	Course Outcomes SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT – S6CCM24
CO – 1	To enable students to understand various dimensions of managing on investment programme.
CO – 2	To familiarize the students regarding the techniques of analysing securities being applied by fund managers.
CO – 3	Understand, analyse and Various strategies of futures and options in the derivatives markets.
CO – 4	Construct, Analyse, Select and Evaluate Portfolio Management Models
CO – 5	To develop an insight into various issues in portfolio construction, revision and evaluation.

CO NO	Course Outcomes FINANCIAL MANAGEMENT – S6CCM23
CO – 1	To enable the students about the importance of financial management for a business.
CO – 2	To know about the various function to be considered while planning for investment decisions.
CO – 3	To know about the students regarding the various types of financial decision taken by the organisations.
CO – 4	To enable the students to understand working capital management inventories, receivable management and management of cash.
CO – 5	To understand the applications of certain dividend decisions and policies.

CO NO	Course Outcomes COMPUTER NETWORKS – S6CCM26
CO - 1	Students will be able to describe the functions of each layer in OSI and TCP/IP model
CO – 2	Students will be able to explain the functions of Application layer and Presentation layer paradigms and protocols
CO – 3	Students will be able to describe the Session layer design issues and Transport layer services
CO – 4	Students will be able to classify the routing protocols and analyze how to assign the IP addresses for the given network
CO – 5	Students will be able to explain the types of transmission media with real time applications

CO NO	Course Outcomes LAB IN COMPUTER NETWORKS - S6CCML5
CO - 1	Explores concept of data communication
CO - 2	Investigate computer network concepts
CO - 3	Investigate network models
CO - 4	Identifies network topologies
CO -5	Explores concept of wireless technologies

CO NO	Course Outcomes INTERNET AND E-COMMERCE – S6ECM10
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CO - 1	Demonstrate an understanding of the foundations and importance of E-Commerce
CO – 2	Analyze the impact of E-Commerce on business models and strategy
CO – 3	Discuss legal issues and privacy in E-Commerce
CO – 4	Assess electronic payment systems
CO – 5	Recognize and discuss global E-Commerce issues

CO NO	Course Outcomes MARKETING , BUSINESS LAW, STATISTICS FUNDAMENTALS OF COMPUTER– S6SCM2 (SSP)
CO – 1	To outline the uses of statistics in various business areas and demonstrate diagrammatical and graphical representation.
CO – 2	To enable the development of marketing strategies.
CO – 3	Explain the various provisions of the Indian Contract Act 1872
CO – 4	Bridge the fundamental concepts of computers

CO NO	Course Outcomes PROJECT - S6ECMP
CO - 1	Student able to create application
CO - 2	Advance control used to generate VB .Net application
CO - 3	Office Application generated
CO - 4	Control tools apply for generate and modify machine
CO - 5	Understand software develop models and engineering model

## **DEPARTMENT OF COMMERCE**

### **B.Com (INFORMATION TECHNOLOGY) - SUCI**

<b>PO NO</b>	<b>Programme Outcomes</b>
<b>PO – 1</b>	The students will be ready for employment in functional areas like accounting, taxation, banking, insurance and corporate law.
<b>PO – 2</b>	An attitude for working effectively and efficiently in a business environment.
<b>PO – 3</b>	Learners will gain knowledge of various disciplines of commerce, business, accounting, economics, and finance, auditing and marketing.
<b>PO – 4</b>	Self-employment confidences develop.
<b>PO – 5</b>	Understanding legal issue/ law relating to banking and insurance sector.

<b>PSO NO</b>	<b>Programme Specific Outcomes</b>
<b>PSO – 1</b>	Understand the basic concepts of the commerce, management, accounting of & economics.
<b>PSO – 2</b>	Analyse relationship among commerce, trade industry, services, management and administration.
<b>PSO – 3</b>	Perform all accounting activities and can handle type of business very well.
<b>PSO – 4</b>	Understand application of knowledge of commerce in business service sector industry, marketing, finance entrepreneurship development etc.
<b>PSO – 5</b>	Develop communication skills and computer awareness and rules of income tax act.

CO NO	Course Outcomes BUSINESS COMMUNICATION – P1CMI4
CO – 1	Develop oral and written business communication skills
CO – 2	The students will be able to understand about trade enquires, & also the concept of collection letter
CO – 3	To write up the Banking insurance & agency correspondence.
CO – 4	To Describe the company secretarial correspondence.
CO – 5	To prepare application letters & business report presentations.

CO NO	Course Outcomes FINANCIAL ACCOUNTING - I – P3CCMI5
CO – 1	To enable the students to get an idea vision of Accounting
CO – 2	To ensure the detailed coverage of final accounts
CO – 3	To have an idea of bill of exchange accounting
CO – 4	To apply BRS quantitative skills to help analyses and solve business problems
CO – 5	To understand the basic idea of depreciation accounting

CO NO	Course Outcomes PRINCIPLES OF INFORMATION TECHNOLOGY - P3CCMI6
CO – 1	Bridge the fundamental concepts of computers with the present level of knowledge of the students
CO – 2	Familiarise operating systems, programming languages, peripheral devices, networking and internet
CO – 3	Understand Binary, Hexadecimal and Octal number systems and their arithmetic
CO – 4	Describe the important computer system resources and the role of operating system in their management policies and algorithms
CO – 5	Use Microsoft Office programs to create personal, academic and business documents

CO NO	Course Outcomes M/S OFFICE– P3ACMI3
CO – 1	To impart knowledge regarding concepts of Dos and Windows
CO – 2	To learn how to create the document with the help of features of M/S Word.
CO – 3	To learn how to use the formulas for calculation with the help of functions of M/S Excel
CO – 4	To learn how to design and features of M/S Power point.
CO – 5	To explore the Microsoft office Access and other features.

CO NO	Course Outcomes LAB IN M/S OFFICE– P3ACMIL3
CO – 1	To create the knowledge regarding framing the application letter with resume and other file creating.
CO – 2	To learn the simple formula for basic calculation M/S Excel.
CO – 3	To use the formulas for salary and tax calculation in M/S Excel
CO – 4	To design the greeting cards and others for presentation in M/S Power point.

CO NO	Course Outcomes BUSINESS ORGANISATION– Q1CMI5
CO – 1	To understand the basic concepts of Business.
CO – 2	To Equip the keen knowledge of formation of Business.
CO – 3	To Know about difference between Joint stock company and Partnership Firm.
CO – 4	To Acquire conceptual knowledge of company Management
CO – 5	To learn the Features of Co-operative Enterprise and Public Enterprise.



CO NO	Course Outcomes FINANCIAL ACCOUNTING-II - Q3CCMI7
CO – 1	To recollect the basic concept and terms of the Consignment Accounting
CO – 2	To familiarize students with the accounting treatment adopted for joint venture accounts
CO – 3	To understand the basic in preparing single entry system
CO – 4	To apply the knowledge in evaluating for non-profit trading concerns
CO – 5	To understand the basic idea of fire insurance claim

CO NO	Course Outcomes C PROGRAMMING – Q3CCMI8
CO – 1	Outline the concepts of procedure oriented programming
CO – 2	Identify the various control structure.
CO – 3	Classify various functions in C.
CO – 4	Evaluate the file operations
CO – 5	Discuss and solve the commercial problem.

CO NO	Course Outcomes LAB IN C-PROGRAMMING - Q3CCMIL4
CO – 1	Illustrate the control statements to write basic C programs
CO – 2	Identify the usage of arrays, functions, structures, union and pointers
CO – 3	Analyze the features of structures, union and their applications
CO – 4	Evaluate the importance of pointers with array and functions
CO – 5	Develop C programs using file management concepts

CO NO	Course Outcomes E-COMMERCE AND IT'S APPLICATION- Q3ACMI4
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CO – 1	Analyse the impact of E-Commerce business models.
CO – 2	Describe the infrastructure for E- Commerce.
CO – 3	Discuss legal issues and privacy commerce
CO – 4	Evaluate the functions of digital information system
CO – 5	Discuss the various digital network

CO NO	Course Outcomes LAB IN HTML - Q3ACMIL4
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CO – 1	Analyze a web page and identify its elements and attributes
CO – 2	Create web pages using XHTML and cascading style sheets
CO – 3	Develop skills in analyzing the usability of a web site
CO – 4	Be able to embed social media content in to web pages

CO NO	Course Outcomes FINANCIAL ACCOUNTING – III – R3CCMI14
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CO – 1	To enable the students to acquire knowledge in the preparation of regarding accounts.
CO – 2	To enable the students to understand the preparation of hire purchase and instalment purchase system.
CO – 3	To enable the students to understand the maintenance of branch accounts.
CO – 4	To enable the students to understand maintain of departmental accounts.
CO – 5	To enable the students to gain a sound knowledge on Indian accounting standards (Ind. As)

CO NO	Course Outcomes C++ PROGRAMMING - R3CCMI15
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CO – 1	To understand how C++ improves c with object oriented features
CO – 2	To learn how to write inline functions for efficiency and performances
CO – 3	To learn how to design C++ classes for code reuse

CO – 4	To learn the syntax and semantics of the C++ programming language
CO – 5	To learn how to design and implement generic classes with C++ templates

CO NO	Course Outcomes LAB IN C++ PROGRAMMING - R3CCMIL5
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CO – 1	Find the solution to a problem using object oriented programming concepts
CO – 2	Choose the relevant OOPS concepts to write program
CO – 3	Evaluate the develop programs using test data
CO – 4	Build data structure application using C++

CO NO	Course Outcomes MODERN BANKING – R3CCMI17
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CO – 1	To enable them to understand better customer relationship
CO – 2	To provide knowledge about deposits and types of customer
CO – 3	To aim to familiarize banking loans and advances
CO – 4	To create awareness about modern banking services like e-banking, m-banking and internet banking
CO – 5	To acquire knowledge on electronic fund transfer, e-money and core banking solutions

CO NO	Course Outcomes BUSINESS STATISTICS – R3CCMI16
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CO – 1	To outline the uses of statistics in various business areas and demonstrate data in diagrammatical and graphical representations.
CO – 2	To Evaluate the importance of statistical tools like Averages, dispersion, index nos., Time series, Correlation and Regression.
CO – 3	To compute and interpret the correlation between two variables
CO – 4	To delineate the concept of Time series and Index numbers
CO – 5	To forecast the business trends in the form of report using time series

CO NO	Course Outcomes SOFTWARE ENGINEERING – R3ACMI5
CO – 1	Know the concepts of software engineering
CO – 2	Estimate the software costing techniques
CO – 3	Gain knowledge of various software testing methods in software development process.
CO – 4	An ability to communicate effectively with a range of audiences
CO – 5	An ability to acquire and apply new knowledge as needed using appropriate learning strategies

CO NO	Course Outcomes PARTNERSHIP ACCOUNTS – S3CCMI17
CO – 1	To enable the student to understand the fundamentals and accounting procedure for partnership accounts.
CO – 2	To enable the student to understand the accounting treatment for administration of partners.
CO – 3	To enable the student to understand the account treatment for retirement of partners.
CO – 4	To enable the student to understand the handle the accounts relating to dissolution of partnership firm.
CO – 5	To enable to students to understand the handle the accounts relating to Piecemeal distribution cash sale to a company and amalgamation of partnership firm.

CO NO	Course Outcomes BUSINESS MATHEMATICS – S3CCMI16
CO – 1	To explain the concepts of set theory, draw Venn diagrams to solve practical problems
CO – 2	To clarify the perception of commercial arithmetic using business level
CO – 3	To Experiment with the Mathematical Tools like Ratio, Proportion and Variation
CO – 4	To recognize the axioms of a system of Probability in the business level
CO – 5	To evaluate some business problems via Theoretical Distribution

CO NO	Course Outcomes JAVA PROGRAMMING- S3CCMI18
CO – 1	Explain the concepts of arrays, threads, applets, exception handling, networking and JDBC
CO – 2	Make use of object oriented programming, API packages and Files
CO – 3	Distinguish console programming with Graphical programming
CO – 4	Interpret the classes in Java API packages and RMI
CO – 5	Create standalone Java based applications

CO NO	Course Outcomes LAB IN JAVA PROGRAMMING - S3CCMIL6
CO – 1	Explain simple Object Oriented Programs using Java
CO – 2	Apply the working principles of multithreading, exception and file handling
CO – 3	Inspect the usage of string operations
CO – 4	Interpret the implementation of networking and JDBC in JAVA
CO – 5	Develop GUI based Application using applet and swing components

CO NO	Course Outcomes SOFTWARE DEVELOPMENT IN VISUAL BASIC – S3ACMI6
CO – 1	Explain basic concepts and definitions
CO – 2	Express constants and arithmetic operations
CO – 3	Distinguish variable and data types
CO – 4	Manage and analyze prepared project with programs
CO – 5	Interpret and report obtaining results

CO NO	Course Outcomes LAB IN SOFTWARE DEVELOPMENT IN VISUAL BASIC - S3ACMIL1
CO – 1	Explain the concepts of VB
CO – 2	Identify the role of control structure
CO – 3	Classify the controls in VB
CO – 4	Evaluate the functions of graphics in VB
CO – 5	Elaborate the database connectivity in VB

CO NO	Course Outcomes MODERN MARKETING – S3ECMI3
CO – 1	To acquire an understanding of Fundamental concepts of Marketing.
CO – 2	To Enable the development of marketing strategies.
CO – 3	To Learn the concept on advertising and sales promotion.
CO – 4	To Analyze Marketing of physical channel of distribution.
CO – 5	To understand the Customer Relationship Marketing and Green Marketing.

CO NO	Course Outcomes COSTING – T3CCMI23
CO – 1	To enable the students to get an ideal vision of costing.
CO – 2	To ensure the detailed coverage of material cost control.
CO – 3	To have an idea of labour cost control.
CO – 4	To have a vision an using process costing.
CO – 5	To ensure the students for preparing an operating cost statement.

CO NO	Course Outcomes NETWORKING MANAGEMENT - T3CCMI20
CO – 1	Explain the use of computer networks and the significance of network security
CO – 2	Identify the functionalities and protocol of various layers in OSI reference model
CO – 3	Distinguish between connection oriented service and connectionless services
CO – 4	Evaluate the importance routing algorithm, congestion control and domain name system
CO – 5	Discuss the usage of IP address, electronic mail and the techniques of security

CO NO	Course Outcomes INCOME TAX – I – T3CCMI22
CO – 1	To introduce the basic concept of Income Tax
CO – 2	To acquire knowledge about income from salary
CO – 3	To calculate income from house property
CO – 4	To enlighten knowledge the income from business or profession
CO – 5	To provide knowledge about capital gains and income from other sources

CO NO	Course Outcomes RDBMS – T3CCMI21
CO – 1	Define the terminology, features, classifications and characteristics embodied in database systems.
CO – 2	Comprehend the concepts of basic database storage structure and access technique.
CO – 3	Know commercial relational database system by writing SQL using the system
CO – 4	Master the basics of SQL and construct queries using SQL
CO – 5	Master the basics of query evaluation techniques

CO NO	Course Outcomes LAB IN RDBMS - T3CCMIL7
CO – 1	Demonstrate the structured query language commands, constraints and functions

CO – 2	Experiment with join operations and set operations
CO – 3	Examine the procedural language/ structured query language, cursor and exception handling
CO – 4	Evaluate the procedures, functions ,triggers and oracle reports
CO – 5	Construct an database for an application

CO NO	Course Outcomes COMPANY ACCOUNTS – T3ECMI4
CO – 1	To understand the accounting procedure for issue of shares and debentures, redemption of preference shares and debentures.
CO – 2	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profits, if a company as per Companies Act 2013.
CO – 3	To Understand and Develop the skills of valuation of goodwill and shares
CO – 4	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes MANAGEMENT ACCOUNTING – U3CCMI23
CO – 1	To know about the practice of management accounting concepts
CO – 2	To have a wide knowledge in practising ratio analysis.
CO – 3	To prepare cash flow analysis.
CO – 4	To get an idea about decision making while learning marginal costing.
CO – 5	To get an idea of practicing standard costing.

CO NO	Course Outcomes COMPUTERIZED ACCOUNTING - U3CCMI24
CO – 1	Knowledge about Accounting terms
CO – 2	To learn computerized accounting technique



CO – 3	To understand financial accounting
CO – 4	To learn how to prepare final accounts and cost accounting
CO – 5	Knowledge regarding GST calculation

CO NO	Course Outcomes LAB IN COMPUTERIZED ACCOUNTING - U3CCMIL10
CO – 1	Prepare vouchers in T ally
CO – 2	Expertise in creation of new company in Tally
CO – 3	Endorse trail balance through Tally

CO NO	Course Outcomes INCOME TAX – II – U3CCMI25
CO – 1	To enabling the students to have a fair idea on set-off and carry forward of losses
CO – 2	To determine the concept of assessment of individual
CO – 3	To equip the students with thoughts and points on assessment of firms, AOP and companies
CO – 4	To determine the knowledge about income tax authorities
CO – 5	To acquire knowledge about procedure for assessment

CO NO	Course Outcomes ADUITING - U3ECMI5
CO – 1	Ascertain the principles of auditing and its classification.
CO – 2	Exemplify the procedure in vouching investigation and appointment of auditors.
CO – 3	Discovers new areas of auditing.
CO – 4	Gain knowledge about the basic principles of auditing and its classification.
CO – 5	Distinguish between internet check control and audit.

**DEPARTMENT OF COMMERCE**  
**B.Com RETAIL MARKETING - SUCR**

PO NO	Programme Outcomes
PO – 1	The students will be ready for employment opportunities in retail industry and entrepreneurship
PO – 2	Retail is a dynamic industry, comprising a vast employment in modern business.
PO – 3	The candidate ready for functional areas like taxation, corporate accounting
PO – 4	The candidate ready for functional areas like Law and practice of modern banking, Insurance sector, Business law, Retail franchising
PO – 5	The candidate ready for functional areas like Retail development, Business environment, Practical Auditing and Modern marketing

PSO NO	Programme Specific Outcomes
PSO – 1	Understand the concept of the retail sector
PSO – 2	Know the modern marketing and e-banking activities
PSO – 3	Maintain different types of accounts in all size of firm
PSO – 4	Have a sound knowledge of direct taxation
PSO – 5	Handle the legal issues of the organization

CO NO	Course Outcomes BUSINESS COMMUNICATION – P1CMR3
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CO – 1	Develop oral and written business communication skills
CO – 2	The students will be able to understand about trade enquires, & also the concept of collection letter
CO – 3	To write up the Banking insurance & agency correspondence.
CO – 4	To Describe the company secretarial correspondence.
CO – 5	To prepare application letters & business report presentations.

CO NO	Course Outcomes FINANCIAL ACCOUNTING - I – P3CCMR3
CO – 1	To enable the students to get an idea vision of Accounting
CO – 2	To ensure the detailed coverage of final accounts
CO – 3	To have an idea of bill of exchange accounting
CO – 4	To apply BRS quantitative skills to help analyses and solve business problems
CO – 5	To understand the basic idea of depreciation accounting

CO NO	Course Outcomes LAB IN MS OFFICE – P3CCMRL1
CO – 1	To introduce the students about basics of MS – Office
CO – 2	To provide practical knowledge exposure to MS - Word
CO – 3	To provide practical knowledge exposure to MS –Excel
CO – 4	To provide practical knowledge experience to MS – Power point
CO – 5	Develop the competence of database management

CO NO	Course Outcomes BUSINESS ECONOMICS – P3ACMR2
CO – 1	To enhance the students on managerial economics

CO – 2	To familiarize students about fundamental concept
CO – 3	To understand the law of demand, optimum level of population
CO – 4	To make them understand sales forecasting
CO – 5	To know the profit planning and profit forecasting

CO NO	Course Outcomes BUSINESS ORGANISATION– Q1CMR4
CO – 1	To understand the basic concepts of Business.
CO – 2	To Equip the keen knowledge of formation of Business.
CO – 3	To Know about difference between Joint stock company and Partnership Firm.
CO – 4	To Acquire conceptual knowledge of company Management
CO – 5	To learn the Features of Co-operative Enterprise and Public Enterprise.

CO NO	Course Outcomes FINANCIAL ACCOUNTING-II – Q3CCMR4
CO – 1	To recollect the basic concept and terms of the Consignment Accounting
CO – 2	To familiarize students with the accounting treatment adopted for joint venture accounts
CO – 3	To understand the basic in preparing single entry system
CO – 4	To apply the knowledge in evaluating for non-profit trading concerns
CO – 5	To understand the basic idea of fire insurance claim

CO NO	Course Outcomes RETAIL FRANCHISING – Q3ACMR1
CO – 1	This subject will help the students to become a good franchisee
CO – 2	To enable the students to learn franchising as strategy
CO – 3	To familiarize students about investigating and evaluating a franchisee

CO – 4	To know the financial aspects of a franchisee
CO – 5	To understand and analyze legal aspects of franchisee

CO NO	Course Outcomes ADVERISING AND SALES PROMOTION- Q3CCMR5
CO – 1	To develop an idea about advertisement and its functions
CO – 2	To familiarize students about advertising media and its classification of advertising media
CO – 3	To analyze sales promotion, knowledge on design and execution of advertising
CO – 4	To understand online sales promotions
CO – 5	This subject will help the students to become a good advertisers and sales executives

CO NO	Course Outcomes FINANCIAL ACCOUNTING – III – R3CCMR6
CO – 1	To enable the students to acquire knowledge in the preparation of regarding accounts.
CO – 2	To enable the students to understand the preparation of hire purchase and instalment purchase system.
CO – 3	To enable the students to understand the maintenance of branch accounts.
CO – 4	To enable the students to understand maintain of departmental accounts.
CO – 5	To enable the students to gain a sound knowledge on Indian accounting standards (Ind. As)

CO NO	Course Outcomes BUSINESS STATISTICS –R3CCMR7
CO – 1	To outline the uses of statistics in various business areas and demonstrate data in diagrammatical and graphical representations.
CO – 2	To Evaluate the importance of statistical tools like Averages, dispersion, index nos., Time series, Correlation and Regression.
CO – 3	To compute and interpret the correlation between two variables
CO – 4	To delineate the concept of Time series and Index numbers
CO – 5	To forecast the business trends in the form of report using time series

CO NO	Course Outcomes ENTREPRENEURIAL DEVELOPMENT – R3CCMR9
CO – 1	To understand the students know the who is Entrepreneur, importants of entrepreneur and his role for economic development .type of entrepreneur and entrepreneur vs manager
CO – 2	To familiarize how to starting a new venture, search for a new business idea, project formation and stages of project formation
CO – 3	To know the institutional finance to Entrepreneurs and commercial banks
CO – 4	To enhance the marketing assistance and incentives and subsidies. The students to know the marketing services bi SIDO.
CO – 5	To know the steps for starting a SSI and students to know the procedure for registration. To understand problems of women entrepreneur

CO NO	Course Outcomes MODERN BANKING- R3CCMR10
CO – 1	To understand the relationship between banker and customer and to know the cheque and banker's Lien
CO – 2	The students familiarize the types of deposits, FDR, procedures for opening accounts in the name of minor, married women, illiterate, lunatic, partnership firm, joint stock company and Non- trading concerns
CO – 3	To extend the students on Loans and advances, Secured Vs Unsecured advances, Life Insurance policies, book debts, supply of bills and discounting bills
CO – 4	To familiarize E- banking, mobile banking, ATM, Credit cards CDM and constraints in E- banking
CO – 5	To recognize the electronic fund transfer, RBI Guidelines, E-cheques, E-money, cheque transaction, core banking solutions and demote accounting

CO NO	Course Outcomes BUSINESS ENVIRONMENT – S3CCMR7
CO – 1	To understand the students about meaning of business environment, component of business environment and business strategy
CO – 2	To know the political environment, social and cultural environment and impact of foreign culture
CO – 3	To familiarize economic environment, economic development, five year planning in India, types of economic system and industrial policy
CO – 4	To make them understand about international monetary fund, GATT, WTO, Social Responsibilities and social audit
CO – 5	To enhance the students natural environment, impact of the future pollution, environment management, benefits of pollution prevention and barriers to pollution prevention.

CO NO	Course Outcomes PARTNERSHIP ACCOUNT –S3CCMR6
CO – 1	To enable the student to understand the fundamentals and accounting procedure for partnership accounts.

CO – 2	To enable the student to understand the accounting treatment for administration of partners.
CO – 3	To enable the student to understand the account treatment for retirement of partners.
CO – 4	To enable the student to understand the handle the accounts relating to dissolution of partnership firm.
CO – 5	To enable to students to understand the handle the accounts relating to Piecemeal distribution cash sale to a company and amalgamation of partnership firm.

CO NO	Course Outcomes BUSINESS MATHEMATICS – S3CCMR5
CO – 1	To explain the concepts of set theory, draw Venn diagrams to solve practical problems
CO – 2	To clarify the perception of commercial arithmetic using business level
CO – 3	To Experiment with the Mathematical Tools like Ratio, Proportion and Variation
CO – 4	To recognize the axioms of a system of Probability in the business level
CO – 5	To evaluate some business problems via Theoretical Distribution

CO NO	Course Outcomes INSURANCE PRINCIPLES AND PRACTICE – S3CCMR8
CO – 1	The students understand the insurance, functions, classification, who has an insurable interest? Advantages of insurance ,Premium, hazard, Re- insurance, Double insurance and economic development of insurance
CO – 2	To know the life insurance characteristics, advantages, Life insurance Vs Non-life insurance, principles of insurance policies, Types of risk and mortality table.
CO – 3	To familiarize the fire insurance, functions of fire insurance, principles of fire insurance, procedure of effecting a fire insurance policy, kinds of fire policies and procedure for settlement of claims under fire insurance
CO – 4	To make them understand marine insurance, marine perils and settlement of claims under marine insurance
CO – 5	To enhance the students motor insurance, motor policy and settlement of claims under motor insurance

CO NO	Course Outcomes MODERN MARKETING – S3ECMR2
CO – 1	The students understand the marketing, importance of marketing, marketing concept
CO – 2	The students to know the product planning and development, factors affecting pricing
CO – 3	To description the students to the promotion, personal selling and controlling salesmanship

CO – 4	To make possible the physical distribution, factors affecting the selection of suitable channel
CO – 5	To help the students to gain knowledge on customer relationship marketing, online marketing , green marketing

CO NO	Course Outcomes INCOME TAX – I –T3CCMR5
CO – 1	To introduce the basic concept of Income Tax
CO – 2	To acquire knowledge about income from salary
CO – 3	To calculate income from house property
CO – 4	To enlighten knowledge the income from business or profession
CO – 5	To provide knowledge about capital gains and income from other sources

CO NO	Course Outcomes EXPORT IMPORT PROCEDURE AND DOCUMENTATION – T3CCMR8
CO – 1	To expose the students to the export import procedure and documentation formalities
CO – 2	To enable the students to learn the registration formalities, selection of product and markets for exports
CO – 3	To make famous the students on export pricing and methods of payment and export documentation
CO – 4	To enhance the students export procedure and export contract
CO – 5	To know the preliminaries for imports and import procedure

CO NO	Course Outcomes BUSINESS LAW – T3CCMR7
CO – 1	To expose the students to the basic features of laws governing business
CO – 2	To enable the students to learn the law relating to contract, breach of contract and remedies for breach of contract
CO – 3	To understand the law relating to bailment and pledge
CO – 4	To familiarize the students on sale of goods act consumer protection Act and rights of consumers
CO – 5	To provide a thorough knowledge of the arbitration ACT, who is an arbitrator, appointment



CO NO	Course Outcomes COSTING – T3CCMR6
CO – 1	To enable the students to get an ideal vision of costing.
CO – 2	To ensure the detailed coverage of material cost control.
CO – 3	To have an idea of labour cost control.
CO – 4	To have a vision an using process costing.
CO – 5	To ensure the students for preparing an operating cost statement.

CO NO	Course Outcomes COMPANY ACCOUNTS –T3ECMR3
CO – 1	To understand the accounting procedure for issue of shares and debentures, redemption of preference shares and debentures.
CO – 2	To gain knowledge of divisible profit and its implications in various accounting procedures leading to preparation of final accounts and calculation of pre-incorporation profits, if a company as per Companies Act 2013.
CO – 3	To Understand and Develop the skills of valuation of goodwill and shares
CO – 4	To acquire knowledge about Amalgamation, Merger and Internal Reconstruction.
CO – 5	To Understand and Exposure concerning the liquation procedure of a company

CO NO	Course Outcomes PRINCIPLES OF COMMERCE AND GENERAL COMMERCIAL KNOWLEDGE - I –T3SCMR4
CO – 1	To enable the students to understand the commerce
CO – 2	To make the students understand about join stock company
CO – 3	To enable the students to understand the office, office administration
CO – 4	To enable the students to understand the office machines
CO – 5	To understand the trade and foreign trade

CO NO	Course Outcomes INCOME TAX – II – U3CCMR7
CO – 1	To enabling the students to have a fair idea on set-off and carry forward of losses
CO – 2	To determine the concept of assessment of individual
CO – 3	To equip the students with thoughts and points on assessment of firms, AOP and companies
CO – 4	To determine the knowledge about income tax authorities
CO – 5	To acquire knowledge about procedure for assessment

CO NO	Course Outcomes SALES MANAGEMENT – U3CCMR6
CO – 1	To enable the students to acquire the basic knowledge of the sales management.
CO – 2	To provide a thorough knowledge of the personal selling, nature, kinds, qualities, functions and importance.
CO – 3	To provide an insight into the recruitment and selection of salesman.
CO – 4	To make them understand training of salesmen and factors determining sales territory.
CO – 5	To know the remuneration of salesmen, requisites of a sound compensation plan, motivation of salesmen and methods of motivation.

CO NO	Course Outcomes LAB IN ACCOUNTING SOFTWARE – U3CCMRL1
CO – 1	To provide a thorough knowledge of the electronic accounting package and to enable the students to acquire practical knowledge in accounting software
CO – 2	To enable the students to acquire the basic knowledge of the fundamentals of TALLY, maintaining company data and basic company details
CO – 3	To familiarize the students on TALLY accounting and understanding classification of groups and ledges
CO – 4	To make them understand the students on TALLY inventory, vouchers
CO – 5	To know the displaying and reporting statements of accounts, books of account and inventory reports

CO NO	Course Outcomes MANAGEMENT ACCOUNTING – U3CCMR5
CO – 1	To know about the practice of management accounting concepts
CO – 2	To have a wide knowledge in practising ratio analysis.

CO – 3	To prepare cash flow analysis.
CO – 4	To get an idea about decision making while learning marginal costing.
CO – 5	To get an idea of practicing standard costing.

CO NO	Course Outcomes AUDITING – U3ECMR3
CO – 1	To develop an idea about principles and practice of auditing
CO – 2	To enhance the students on Internal audit and external audit
CO – 3	To aim to familiarize vouching
CO – 4	To provide knowledge about verification and valuation of assets and liabilities
CO – 5	To prepare audit report

**DEPARTMENT OF BUSINESS ADMINISTRATION**

**B.B.A (COMPUTER APPLICATION) - SUBA**

PO NO	Programme Outcomes
PO – 1	Demonstrate fundamental knowledge in accounting ,economics, finance management and marketing in application of concept and theories
PO – 2	Produce creative business solution
PO – 3	Demonstrate knowledge and able to identify accepted ethical business standards.
PO – 4	Realize effective skills in written and oral communications using appropriate technologies.
PO – 5	Develop a self-employment that will be able to initiate and build up entrepreneurial venture and demonstrate entrepreneurship for their employer organizations.

PSO NO	Programme Specific Outcomes
PSO – 1	Acquire academic excellence with an aptitude for higher studies, research and to meet competitive exams.
PSO – 2	Display competencies and knowledge in keys functional areas with commercial correspondence.
PSO – 3	Equip them effectively in social ethical value, manage people and build strong relationship.
PSO – 4	Enhance critical thinking and analytical skills in terms of decision making.
PSO – 5	Develop entrepreneurial skill to motivate towards start-up.

CO NO	Course Outcomes COMMUNICATION SYSTEMS - P1BB4
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CO – 1	To define an important of business communication need of business letter's it's function and kinds.
CO – 2	To explain various trade enquire.
CO – 3	To write up the banking, insurance and agency correspondence.
CO – 4	To describe the company secretarial correspondence.
CO – 5	To prepare application letters and business report presentation.

CO NO	Course Outcomes MANAGEMENT THEORY AND PRACTICE - P3CCBB6
CO – 1	Describe management is concerned with the implementation or execution.
CO – 2	Compare planning and decision making are different
CO – 3	Recall selecting one alternative from among many alternative is what is called decision making.
CO – 4	Examine motivation by human needs.
CO – 5	Co-ordination is necessary mainly due to interdependence.

CO NO	Course Outcomes PRINCIPLES OF ACCOUNTING – P3CBB7
CO – 1	Consequences the fundamental concepts Of accounting and book keeping
CO – 2	Obtain problems related to Journal, ledger, trial balance and errors
CO – 3	Analyze various methods of deprecation
CO – 4	Assessing capital expenditure revenue expenditure and final accounts.
CO – 5	Evaluate the impact of non trading concern

CO NO	Course Outcomes LAB IN MS-OFFICE - P3ABBL3
CO – 1	To learn about the computer, components, algorithm, flowchart.
CO – 2	Demonstrate the various menus and its operation Word (mail merge table, spelling and grammar, macro etc).
CO – 3	Write up MS-Excel along with practical usage like preparation of student mark list, EB Bill, salary calculation by using formula and different type of charts.

CO – 4	Creation of various slides and different format Effects with the help of MS-Power point
CO – 5	Formation of payroll for employee, students mark list and creation of forms and reports by using MS-Access.

CO NO	Course Outcomes BUSINESS ECONOMICS - Q1BB5
CO – 1	Describe the nature of the business economics.
CO – 2	Apply demand analysis to relevant economics issues.
CO – 3	Examine the production and cost function.
CO – 4	Compare price under various market conditions.
CO – 5	Appraisal the methods of measuring national income.

CO NO	Course Outcomes ORGANISATIONAL BEHAVIOUR - Q3CBB9
CO – 1	Behaviour of organization, out comes and the challenges of Organization.
CO – 2	Aspects regarding classical & neo classical and discover the models of organizational behaviour
CO – 3	Illustrate theories of personality and the theories related to the motivation and perception.
CO – 4	Acquiring groups, types, stages and examine the leadership styles and theories.
CO – 5	Analysis organizational culture & climate and infer the importance of organizational change.

CO NO	Course Outcomes MARKETING MANAGEMENT – Q3CBB10
CO – 1	To Explain Marketing is also a social process in the sense.
CO – 2	To Describe Marketing is concerned with human needs.
CO – 3	Recall All Marketing activities revoke around exchange process
CO – 4	To prepare the Marketing organisation must have its own goals and objective
CO – 5	To understand the Modern concept Of Market and analysis various elements of Markets, Marketing Mix.

CO NO	Course Outcomes LAB PROGRAM IN C – Q3ABBL4
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CO – 1	Explore the history, importance, structure of c program and tokens.
CO – 2	To familiar with fundamental concept of operation and expression, input, output statement. Practice on program to develop operator, expression how to set input and display output.
CO – 3	Ability to understand decision making branding and looping(for,while,do while,.if,switch etc)
CO – 4	Ability to practice program for decision making, branching and looping program To learn about array and its types, function and its category.
CO – 5	To practice program for array and function concept. To understanding the programming aspects of structure, pointer, file.

CO NO	Course Outcomes SALES MANAGEMENT - R3CBB14
CO – 1	To Acquire knowledge about Salesmanship.
CO – 2	To Develop Skill as to apply the sales technique to various situations.
CO – 3	To understand the psychology of buyers.
CO – 4	To Develop buying formula theory of selling is the modern approach.
CO – 5	To Essential for the salesman to know the sales policies and strategies.

CO NO	Course Outcomes BUSINESS LAW – R3CBB15
CO – 1	Identify the fundamental legal principles behind contractual agreements.
CO – 2	Classify the contract of agency, and its types and able to understand the sales of Goods Act.
CO – 3	Analyse the Law of Agency and formation of partnership.
CO – 4	Understand the factories act regard to the guidelines in the payment of wages act, payment of bonus act.
CO – 5	Obtain the workmen’s compensation act.

CO NO	Course Outcomes ENVIRONMENT OF BUSINESS – R3CBB17
CO – 1	Understand the concept of business environment and components.
CO – 2	Determine social responsibility of business, social audit and business ethics.
CO – 3	Retrieve the concept of liberalization privatisation & globalization.

CO – 4	Identify the economic system types and analyze be the sectors of SEBI FEMA.
CO – 5	Describe public sector and private sector and summarize WTO.

CO NO	Course Outcomes BUSINESS STATISTICS - R3ABB5
CO – 1	Understand basic statistical concepts such as statistics tabular and graphical representation of data.
CO – 2	Calculate measures of central tendency, measures of dispersion.
CO – 3	Examine the goodness of fit and correction, regression analysis with simple solution.
CO – 4	Construct and interpret index numbers.
CO – 5	Illustrate the concepts of times series measurement of scalar trend.

CO NO	Course Outcomes LAB IN PROGRAMMING IN C++– R3CBBBL4
CO – 1	Ability to understand the basic concept of object oriented, tokens, operators, expression, control structure. Practice program for OOPS, tokens, operator, expression, control structure.
CO – 2	Explore the function concept, function overloading, friend virtual function. To implement and built concept function overloading, friend and virtual function person.
CO – 3	To familiar recall for class, object, and understand constructor and destructor, operator overheads, templates. Practice program for class, object constructor, destructor, operator, overheads, templates.
CO – 4	To learn about inheritance and its type pointer virtual function, polymorphism, I/O operation.
CO – 5	To understand basic file concepts like open, close, I/O operation, decision making, benefit looping.

CO NO	Course Outcomes TOTAL QUALITY MANAGEMENT – S3CBB10
CO – 1	To Explain Quality is conforming to specification and quality was customer satisfaction.
CO – 2	To Describe quality has to be defined in clear term to the industries.
CO – 3	Develop quality circle can to me and to my organisation
CO – 4	To revoke quality increases my self- confidence, improves myself system.
CO – 5	To quality understand concept disposing the unwanted items.



CO NO	Course Outcomes STRATEGIC MANAGEMENT – S3CBB19
CO – 1	To enable the students to know about the strategies followed in an organization.
CO – 2	Explicate the vision and mission and objectives of strategic.
CO – 3	To categorize the corporate level strategies in an organization
CO – 4	Judge the strategic analysis followed in every organization that enhances the corporate level analysis.
CO – 5	Outline the mergers and acquisition strategies, strategic alliances.

CO NO	Course Outcomes LAB IN RDBMS – S3CBBL5
CO – 1	Prepare a table, add record, modify record, delete record in SQL.
CO – 2	Create a relational database using a key constraints.
CO – 3	Describe the basis of joins, set operator, sub queries.
CO – 4	Create a relational database using a E-R model.
CO – 5	Examine problems using procedure, trigger, function, and package.

CO NO	Course Outcomes QUANTITATIVE TECHNIQUES & OPERATIONS RESEARCH – S3ABB7
CO – 1	Matrices and determinants method addition subtractionmultiplicationrank of matrices inverse of a matrices & linear evaluation.
CO – 2	Differentciate probability events laws of probability and addition and multiplication theorem.
CO – 3	Exprement the north west cornerule last cost method VAM method assignment problem.
CO – 4	Calculate game & strategies graphic solution saddle point &dominance property.
CO – 5	Illustrate network scheduling, PERT, CPM and network construction.

CO NO	Course Outcomes ENTREPRENEURIAL DEVELOPMENT – S3EBB3
CO – 1	To know about the various qualities and factors influencing an entrepreneur.

CO – 2	Understand and describe the concept of women entrepreneur and entrepreneurship.
CO – 3	Design new plan, organize and execute a project report for new venture.
CO – 4	Analyse various methods of project appraisal, institutions, support to entrepreneurship development.
CO – 5	Identify the government policies and incentives to the small enterprises.

CO NO	Course Outcomes ACCOUNTING FOR MANAGERS – T3CBB23
CO – 1	Analyze the concept of cost and management accounting.
CO – 2	Demonstrate how firms maintain stock level and material cost by analysing skills.
CO – 3	Assess marginal cost by implementing concepts of firms.
CO – 4	Analyze ratio and calculate their proportions.
CO – 5	Describe various types of budget analysing with simple problems (contrast).

CO NO	Course Outcomes RESEARCH METHODOLOGY – T3CBB22
CO – 1	Understand some basic concepts of research and methodologies.
CO – 2	To make a marketing survey for understanding the realities in conducting research.
CO – 3	Adequate knowledge on measurement and scaling techniques as well as the processing and analysis of data.
CO – 4	Calculate the correlation, Time series, and ANNOVA table with simple problems.
CO – 5	Illustrate hypothesis testing and that able to prepare the report writing.

CO NO	Course Outcomes SERVICE MARKETING – T3CBB24
CO – 1	Relate the concept of service marketing and contrast the different goods & services.
CO – 2	Examine managing demand & supply.
CO – 3	Contrast different types of service marketing mix.
CO – 4	Explicate conceptualization of service product.

CO – 5	Know various major sectors service related to promotions and tools.
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CO NO	Course Outcomes LAB IN VB– T3ABBL2
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CO – 1	Illustrate visual basic anatomy and tools of VB.
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CO – 2	Apply decision making branching and looping function in VB.
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CO – 3	Apply array and its type, record in VB.
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CO – 4	Compile of event driven program execution, flow control in visual basic program, understand the Enums, Control array, flex grid control, data control.
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CO – 5	Develop report oriented application
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CO NO	Course Outcomes PRODUCTION MANAGEMENT – T3EBB5
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CO – 1	TO understand the basic concept of production management
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CO – 2	To analyse the plant location and plant layout
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CO – 3	Assess the maintenance management and describe the economics aspect of maintenance.
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CO – 4	Demonstrate the production system and process of production
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CO – 5	To identify the production planning and control and justify techniques.
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CO NO	Course Outcomes HUMAN RESOURCES MANAGEMENT – U3CBB22
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CO – 1	Recognize the basic concepts of human resource management.
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CO – 2	Explicate the need for human resource that will enhance the planning skills.
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CO – 3	Demonstrate the kinds of training and development.
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CO – 4	To assess the employee's performance appraisal systems.
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CO – 5	Recognize the grievance handling system and emerging issues in employee relations.
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CO NO	Course Outcomes
	INTERNATIONAL MARKETING – U3CBB23
CO – 1	Recall the scope and barriers of International Marketing.
CO – 2	Explore the EXIM procedure in international marketing.
CO – 3	Analyze and remember importance of import and export regulations of EXIM policy.
CO – 4	Judge, how IMF and commercial bank act as a financial advisory institution.
CO – 5	State the pre - import procedure and documentation.

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	INTERNATIONAL MARKETING – U3CBB23
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CO NO	Course Outcomes
	FINANCIAL MANAGEMENT – U3CBB24
CO – 1	Recall the concept of financial management & function of financial managers.
CO – 2	Calculate various source of capital.
CO – 3	Examine working capital management of organization.
CO – 4	Explicate capital budgeting method buy using techniques.
CO – 5	Explain different types of dividend forms examine factors & understand the theories of dividend.

CO NO	Course Outcomes
	FINANCIAL MANAGEMENT – U3CBB24
CO – 1	Recall the concept of financial management & function of financial managers.
CO – 2	Calculate various source of capital.
CO – 3	Examine working capital management of organization.
CO – 4	Explicate capital budgeting method buy using techniques.
CO – 5	Explain different types of dividend forms examine factors & understand the theories of dividend.

CO NO	Course Outcomes
	LAB IN MULTIMEDIA– U3ABBL1
CO – 1	Infer with various technical aspects of multimedia systems and its element,hardware, software, operating system.
CO – 2	Describe various text, text element, graphic, image, colors.
CO – 3	Describe various digital video and audio and its type, computer animation.
CO – 4	Apply the tools and technique that perform creative, editing, deleting multimedia application.
CO – 5	Develop internet based learning of multimedia tool.

CO NO	Course Outcomes
	LAB IN MULTIMEDIA– U3ABBL1
CO – 1	Infer with various technical aspects of multimedia systems and its element,hardware, software, operating system.
CO – 2	Describe various text, text element, graphic, image, colors.
CO – 3	Describe various digital video and audio and its type, computer animation.
CO – 4	Apply the tools and technique that perform creative, editing, deleting multimedia application.
CO – 5	Develop internet based learning of multimedia tool.

**COMMON TO ALL UNDER GRADUATE DEPARTMENT**

CO NO	Course Outcomes VALUE EDUCATION – Q4VE
CO – 1	To give students a deeper understanding about the purpose of life.
CO – 2	Students will understand the importance of value based living.
CO – 3	To help the students impart knowledge on essential qualities to become a leader.
CO – 4	Students will be able to lead a balanced life with emotional stability.
CO – 5	Students will be able to realize their role and contribution to the nation building.

CO NO	Course Outcomes SOFT SKILLS – T4SK1
CO – 1	To create self-confident individuals by mastering the common soft skills.
CO – 2	Students will be able to improve their non-verbal communication skills.
CO – 3	Students will be equipped to apply interpersonal skills in their personal and professional life.
CO – 4	Student will be able to apply the principles of planning and prioritizing in their life.
CO – 5	Students will be able to realize their role and contribution to the nation building.

CO NO	Course Outcomes ENVIRONMENTAL STUDIES – P4ES1
CO – 1	To acquire skills to help people identifying and creating solutions for the environment related problems.
CO – 2	To provide understanding how media professionals can contribute in creating awareness about environmental issues.
CO – 3	To become aware about the various types of pollution its sources, effects and control measure.
CO – 4	To become aware of the biodiversity, conservation method and factors for the loss of biodiversity.
CO – 5	To understand the concept of climate change, global warming, acid rain, various disasters and its migration measures.

CO NO	Course Outcomes GENERAL KNOWLEDGE – U4GK
CO – 1	To impart the extensive knowledge about general knowledge, general awareness and contemporary activities at local, regional, national and international level about socio – economic issues.
CO – 2	To inculcate the extensive knowledge about general knowledge, general awareness and contemporary activities at local, regional, national and international level about educational and cultural issues.

CO – 3	To develop the extensive knowledge about general knowledge, general awareness and contemporary activities at local, regional, national and international level about media related issues.
CO – 4	To develop into understand in the Mental Ability and Tamil Literature
CO – 5	To gain Knowledge for all recruitment and competitive examinations

**NME – Non Major Elective**

**SSP – Self Study Paper**

Department of தமிழ்த்துறை ( சுயநிதிப்பிரிவு )

PO NO	Programme Outcomes
PO – 1	NIL
PO – 2	NIL
PO – 3	NIL
PO – 4	NIL
PO – 5	NIL

PSO NO	Programme Specific Outcomes
PSO – 1	NIL
PSO – 2	NIL
PSO – 3	NIL
PSO – 4	NIL
PSO – 5	NIL

CO NO	<b>Course Outcomes</b> <b>பகுதி - 1 தமிழ் பருவம் - I</b> <b>தாள் - 1 கவிதையும் சிறுகதையும் P1STA2</b>
CO – 1	மரபுக்கவிதைக்கும் புதுக்கவிதைக்கும் உள்ள வேறுபாடுகளை அறிந்து கொள்வர்
CO – 2	கவிதைகள் வழியாக கவிஞர்கள் உணர்த்தும் வாழ்வியல் விழுமியங்களைத் தெரிந்து கொள்வர்
CO – 3	சிறுகதைகள் வெளிப்படுத்தும் நிகழ்காலச் சமுதாயச் சிந்தனைகளை, கருத்துக்களை உணர்ந்து கொள்ளுதல்
CO – 4	கவிதை, சிறுகதை இலக்கியப் படைப்பாக்கத் திறன் பெறுதல்
CO – 5	எழுத்திலக்கணத்தின் அடிப்படையான செய்திகளைத் தெரிந்து பிழையின்றி எழுதக் கற்றுக் கொள்ளுதல்
CO – 6	
CO – 7	



CO NO	<b>Course Outcomes</b> <b>பகுதி - 1 தமிழ் பருவம் - II</b> <b>தாள் - 2 பக்தி இலக்கியமும் புதினமும் Q1STA2</b>
CO – 1	இறைவனிடம் நாயன்மார்களும், ஆழ்வார்களும் கொண்ட பக்தித்திறனை அறிந்து கொள்வர்
CO – 2	பழந்தமிழர்களிடம் இருந்த நம்பிக்கைகள் ஒருமைப்பாடு, மனிதநேயம், கொடைத் தன்மை குறித்து புரிந்து கொள்ளுதல்
CO – 3	இறைவனின் தன்மைகளை ஆழ்ந்துணர்ந்து பக்தி உணர்வை மேம்படுத்துகின்ற சூழலைக் கற்றுக் கொள்ளுதல்
CO – 4	சிற்றிலக்கியங்களின் அமைப்பு, வகைகள், இலக்கியங்கள் வெளிப்படுத்தும் கருத்துக்களை தெரிந்து கொள்வர்
CO – 5	புதின இலக்கியத்தின் வரலாறு குறித்தும், புதின இலக்கியங்கள் வெளிப்படுத்தும் வாழ்வியல் மதிப்புக்களையும் சமூகச் சிந்தனைகளையும் அறிந்து கொள்வர்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பகுதி - 1 தமிழ் பருவம் - III</b> <b>தாள் - 3 காப்பிய இலக்கியமும் நாடகமும் R1STA2</b>
CO – 1	காப்பியங்களின் அமைப்பையும் தோற்றத்தையும் அறிந்து கொள்ளுதல்
CO – 2	காப்பியங்கள் உணர்த்தும் அறங்களையும் வாழ்வியல் சிந்தனைகளையும் தெரிந்து கொள்ளுதல்
CO – 3	சமயக்காப்பியங்கள் வழியே சமயங்கள் குறித்த தெளிவையும், சமயப்பொறையையும் தெரிந்து கொள்ளுதல்
CO – 4	நாடக இலக்கியத்தின் தோற்றப்பின்னணியையும் அமைப்பையும் அறிந்து கொள்வர்
CO – 5	வரலாற்று நாடகத்தின் வழியாக சுதந்திரப் போராட்ட வீரர்களின் தியாகத்தையும் தேச வரலாற்றையும் தெரிந்து நாட்டுப்பற்றை வளர்த்துக் கொள்வர்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பகுதி - 1 தமிழ் பருவம் - IV</b> <b>தாள் - 4 சங்க இலக்கியமும் உரைநடையும் S1STA2</b>
CO – 1	சங்கத் தமிழர்களின் வாழ்வியல் மாண்புகளை அறிந்து கொள்வர்
CO – 2	சங்கத் தமிழர்களின் பண்பாடு, வீரம், ஒழுக்கம், அறம், கொடை பற்றிய செய்திகளை அறிந்து தங்கள் வாழ்வை நெறிப்படுத்தத் தெரிந்து கொள்ளுதல்
CO – 3	சங்க இலக்கியங்களில் உள்ள பழந்தமிழரின் ஆளுமைகளையும், அடையாளங்களையும் தெரிந்து கொள்ளுதல்
CO – 4	ஆய்வுச் சிந்தனைகளைக் கொண்ட அறிஞர்களின் உரைநடை வழியாக தமிழ்மொழியின் பெருமையை அறிந்து உரைநடை படைப்பாக்கத்திறனை வளர்த்துக் கொள்வர்
CO – 5	பண்டைத்தமிழர்களின் இயற்கையோடு இயைந்த வாழ்க்கைமுறையையும், புறவாழ்வு விழுமியங்களையும் அகப்புற இலக்கண வழி தெரிந்து கொள்ளுதல்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பருவம் - III</b> <b>NME அடிப்படைத் தமிழ் - 1</b>
CO – 1	எழுத்திலக்கண அடிப்படையில் தமிழ் எழுத்துக்களை அறிந்து கொள்ளுதல்
CO – 2	தமிழ்ச் சொற்களை முறைப்படுத்தி சொற்றொடர் உருவாக்க கற்றுக் கொள்ளுதல், பிறமொழிச் சொற்களை அடையாளப்படுத்துதல்
CO – 3	தமிழ் மாதங்கள் குறித்தும், ஆங்கில மாதங்களை தமிழிலும் அறிந்து கொள்வர்
CO – 4	சங்க, நீதி இலக்கியங்கள் குறித்த அறிமுகமும் அவை உணர்த்தும் வாழ்வியல் கட்டமைப்பையும் கற்றுணரந்து கொள்ளுதல்
CO – 5	குறிப்பிட்ட சில தமிழ்ச் சொற்களின் பொருள்களை அறிந்து கொள்ளுதல்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பருவம் - III</b> <b>NME சிறப்புத்தமிழ் - 1</b>
CO – 1	புதுக்கவிதை உணர்த்தும் வாழ்வியல் கருத்துக்களை எடுத்துரைத்தல்
CO – 2	சிறுகதைகளின் அமைப்பையும், சிறுகதைகள் வெளிப்படுத்தும் சமுதாயச் சிந்தனைகளையும் அறியச் செய்தல்
CO – 3	கவிதை, சிறுகதை படைக்கும் திறன் பெறுதல்
CO – 4	எழுத்திலக்கண அடிப்படையில் உயிரெழுத்துக்கள், மெய்யெழுத்துக்கள், உயிர்மெய்யெழுத்துக்களை தெரிந்து கொள்ளுதல்
CO – 5	பிழையின்றி கடிதம் எழுதும் பழக்கத்தைக் கற்றுக் கொடுத்தல் அதன்வழி சமூக குறைபாடுகளைக் களைவர்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பருவம் - IV</b> <b>NME அடிப்படைத் தமிழ் - 2</b>
CO – 1	தமிழ் ஒருமை பன்மைச் சொற்களை அடையாளம் கண்டுணர்தல்
CO – 2	தமிழ் இலக்கண மரபுகளை புரிந்து பிழையின்றி எழுதும் திறன் பெறுவர்
CO – 3	கணித எண்களை தமிழ் எழுத்தால் எழுதும் திறனை வளர்த்துக் கொள்ளுதல்
CO – 4	பக்தி இலக்கியங்களை அறிமுகம் செய்து அவ்இலக்கியங்கள் உணர்த்தும் ஒருமைப்பாடு, மனிதநேயம், கொடைத்தன்மை, பக்தித்திறன், சமயப்பொறையை அறிந்து கொள்ளுதல்
CO – 5	குறிப்பிட்ட சில தமிழ்ச்சொற்களின் பொருளை அறிந்து கொள்ளுதல்
CO – 6	
CO – 7	

CO NO	<b>Course Outcomes</b> <b>பருவம் - IV</b> <b>NME சிறப்புத்தமிழ் - 2</b>
CO – 1	மரபுக்கவிதையின் அமைப்பையும் கவிதைகள் தரும் சிந்தனையையும் அறிந்து கொள்ளுதல்
CO – 2	அற இலக்கியங்கள் உணர்த்தும் வாழ்வியல் நெறிமுறைகளைக் கற்றுக் கொள்வர்
CO – 3	எழுத்துப்பிழை, சந்திப்பிழையின்றி எழுதக் கற்றுக் கொள்ளுதல்
CO – 4	சொல்லிலக்கண வழி சொற்களுக்குரிய பாகுபாட்டினை அறியச் செய்தல்
CO – 5	சங்க இலக்கியம், அற இலக்கியம், காப்பியங்களின் சிறப்பினை எடுத்துரைத்தல். இலக்கியங்கள் கற்றுக் கொடுக்கும் வாழ்வியல் உண்மைகளைக் கற்றுக் கொள்ளுதல்
CO – 6	
CO – 7	