मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर की विद्या परिषद की दिनांक 11 जुलाई,2017 को अपरान्ह 02:30 बजे विश्वविद्यालय के स्वर्ण जयंती सभागार में सम्पन्न हुयी अष्ठम बैठक का कार्यवृत्तः

मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर की विद्या परिषद की अष्ठम बैठक दिनांक 11 जुलाई, 2017 को अपरान्ह 02:30 बजे विश्वविद्यालय के स्वर्ण जयंती सभागार में सम्पन्न हुयी जिसमें निम्नलिखित उपस्थित रहें:-

क्रमांक	नाम/पदनाम	
1.	**प्रो0 श्री निवास सिंह** कुलपति, मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**अध्यक्ष**
2.	**प्रो0 दिनेश कुमार सिंह** आचार्य, जूलॉजी विभाग, दीन दयाल उपाध्याय गोरखपुर विश्वविद्यालय, गोरखपुर	**सदस्य**
3.	**श्री ज्योति प्रकाश मसकरा** उद्योगविद्, प्रबन्ध निदेशक, दी महाबीर जूट मिल्स लि0, सहजनवॉ, गोरखपुर	**सदस्य**
4.	**प्रो0 के0 जी0 उपाध्याय** अधिष्ठाता, संकाय मामलें मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
5.	**प्रो0 एस0 के0 श्रीवास्तव** अधिष्ठाता, स्नातक अध्ययन एव उद्यमिता मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
6.	**प्रो0 डी0 के0 द्विवेदी** अधिष्ठाता, परास्नातक अध्ययन एवं शोध व विकास मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
7.	**श्री राम दुलार** अधिष्ठाता, नियोजन नियोजन, श्रोत जनन व एल्युमिनी संबंध मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
8.	**डा0 ए0 एन0 तिवारी** अधिष्ठाता, छात्र मामलें मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
9.	**प्रो0 एस0 एम0 अली0 जावेद** विभागाध्यक्ष, सिविल इंजी0 विभाग / परीक्षा नियंत्रक	**सदस्य**
10.	**प्रो0 उदय शंकर** आचार्य, कम्प्यूटर साइंस एण्ड इंजी0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
11.	**प्रो0 पी0 के0 सिंह** आचार्य, कम्प्यूटर साइंस एण्ड इंजी0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**

12.	**प्रो0 राकेश कुमार** विभागाध्यक्ष, कम्प्यूटर साइंस एण्ड इंजी0 विभाग / अध्यक्ष, सी0एस0ए0 मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
13.	**श्री जी0 एस0 त्रिपाठी** विभागाध्यक्ष, विद्युतकण एवं संचार अभि0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
14.	**डा0 सुधीर कुमार श्रीवास्तव** विभागाध्यक्ष विद्युत अभि0 विभाग, मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
15.	**डा0 एस0 सी0 जायसवाल** विभागाध्यक्ष, यांत्रिक अभि0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
16.	**डा0 अर्जुन दूबे** विभागाध्यक्ष, प्रयुक्त विज्ञान विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
17.	**डा0 पी0 पी0 पाण्डे** विभागाध्यक्ष, केमिकल इंजी0 विभाग	**सदस्य**
18.	**डा0 ए0 के0 डैनियल** समन्वयक, प्रबन्ध अध्ययन केन्द्र मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
19.	**डा0 बृजेश कुमार** सह आचार्य, विद्युतकण एवं संचार अभि0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
20.	**श्रीमती मीनू** सहायक आचार्य, कम्प्यूटर साइंस एण्ड इंजी0 विभाग मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य**
21.	**प्रो0 राम अचल सिंह** पूर्व कुलपति, राम मनोहर लोहिया अवध विश्वविद्यालय, फैजाबाद	**विशेष आमंत्रित सदस्य**
22.	**प्रो0 राजीव त्रिपाठी** निदेशक, एम0एन0एन0आई0टी0, इलाहाबाद	**विशेष आमंत्रित सदस्य**
23.	**डा0 यू0 सी0 जायसवाल** कुलसचिव, मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर	**सदस्य-सचिव**

प्रो0 एस0 सी0 श्रीवास्तव, प्रोफेसर, विद्युत अभि0 विभाग, आई0आई0टी0, कानपुर अपरिहार्य कारणों से बैठक में प्रतिभाग नही कर सकें।

विद्या परिषद द्वारा सर्वसम्मति से निम्नलिखित निर्णय लिये गये:–

8.01 **मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर की विद्या परिषद की सप्तम बैठक के कार्यवृत्त का पुष्टिकरण।**

विद्या परिषद द्वारा दिनांक 08 नवम्बर, 2016 को सम्पन्न हुई विद्या परिषद की सप्तम बैठक के कार्यवृत्त की पुष्टि की गयी।

8.02 **विद्या परिषद की सप्तम बैठक में लिए गये निर्णयों के क्रियान्वित किये जाने का विवरण।**

विद्या परिषद को सप्तम बैठक में लिए गये निर्णयों को क्रियान्वित किये जाने के विवरण से अवगत कराया गया।

8.03 **विद्या परिषद की दिनांक 08 नवम्बर, 2016 को संपन्न सप्तम बैठक के उपरान्त शैक्षणिक क्रियाकलाप समिति की अद्यतन बैठकों के कार्यवृत्तों का अवलोकन।**

विद्या परिषद द्वारा विश्वविद्यालय की शैक्षणिक क्रियाकलाप समिति की 11वीं (29.12.2016), 12वीं (23.01.2017), 13वीं (03.03.2017), 14वीं (07.04.2017) तथा 15वीं (04.07.2017) बैठक के कार्यवृत्तों में लिये गये निर्णयो से अवगत हुई तथा शैक्षणिक क्रियाकलाप समिति की दिनांक 03.03.2017 को सम्पन्न हुई 13वीं बैठक के मद संख्या 13.2 को विद्या परिषद की अष्ठम बैठक के मद संख्या 8.16 के अनुसार संशोधित करते हुए कृत कार्यवाही का अनुमोदन प्रदान किया गया।

8.04 **विश्वविद्यालय के प्रयुक्त विज्ञान विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद प्रयुक्त विज्ञान विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय।

8.05 **विश्वविद्यालय के जनपदीय अभियंत्रण विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद जनपदीय अभियंत्रण विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय।

8.06 **विश्वविद्यालय के विद्युत अभियंत्रण विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद विद्युत अभियंत्रण विभाग की प्रगति आख्या से अवगत हुयी। परिषद नें सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय।

8.07 **विश्वविद्यालय के यांत्रिक अभियंत्रण विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद यांत्रिक अभियंत्रण विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय। परिषद ने यांत्रिक अभि0 विभाग से अपेक्षा की कि विभागीय प्रगति रिपोर्ट में केवल स्वीकृत शोध प्रस्तावों की ही सूची सम्मिलित करें।

8.08 **विश्वविद्यालय के कम्प्यूटर साइंस एण्ड इंजीनियरिंग विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद कम्प्यूटर साइंस एण्ड इंजीनियरिंग विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय।

8.09 **विश्वविद्यालय के विद्युतकण एवं संचार अभियंत्रण विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद विद्युतकण एवं संचार अभियंत्रण विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय

सहायता हेतु प्रेषित किये जाय।

8.10 **विश्वविद्यालय के रसायन अभियांत्रिकी विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद रसायन अभियांत्रिकी विभाग की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को वित्तीय सहायता हेतु प्रेषित किये जाय।

8.11 **विश्वविद्यालय के सेन्टर फार मैनेजमेंट स्टडीज विभाग की Departmental Progress Report का अवलोकन।**

विद्या परिषद प्रबन्ध अध्ययन केन्द्र की प्रगति आख्या से अवगत हुयी। परिषद ने सभी विभागों को अपने आगामी प्रगति रिपोर्ट के प्रथम पृष्ठ पर समस्त विभागीय गतिविधियों की संकलित सूचना Summary Sheet के रूप में विभागीय प्रगति रिपोर्ट के साथ उपलब्ध कराने की अपेक्षा की गयी। परिषद द्वारा सभी विभागो से अपेक्षा की गयी कि संकाय सदस्यों द्वारा वाह्य सहायतित शोध प्रस्ताव अधिक से अधिक संख्या में केन्द्रीय व राज्य अनुदान ईकाइयों को अनुमोदन हेतु प्रेषित किये जाय।

8.12 **शैक्षिक सत्र 2016-17 के इवेन सेमेस्टर के समस्त B.Tech.पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा अनुमोदित परीक्षकों की सूची का अवलोकन।**

विद्या परिषद द्वारा शैक्षिक सत्र 2016-17 के इवेन सेमेस्टर के समस्त B.Tech. पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा अनुमोदित परीक्षकों की सूची का अवलोकन किया गया।

8.13 **शैक्षिक सत्र 2016-17 के इवेन सेमेस्टर के समस्त M.Tech., MCA एवं MBA के पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा अनुमोदित परीक्षकों की सूची का अवलोकन।**

विद्या परिषद द्वारा शैक्षिक सत्र 2016-17 के इवेन सेमेस्टर के समस्त M.Tech., MCA एवं MBA के पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा अनुमोदित परीक्षकों की सूची का अवलोकन किया गया।

8.14 **शैक्षिक सत्र 2017-18 के Academic एवं Co-curricular Calendars पर विचार एवं अनुमोदन।**

विद्या परिषद द्वारा शैक्षिक सत्र 2017-18 के Academic एवं Co-curricular Calendars पर आंशिक सशोधन सहित अनुमोदन प्रदान किया गया। (संलग्नक-1)

8.15 **शैक्षणिक क्रियाकलाप समिति की तेरहवीं बैठक में विश्वविद्यालय के शैक्षिक सत्र 2016-17 में बी0टेक0 द्वितीय वर्ष के अन्तर्गत प्रवेशित छात्रों द्वारा दिये गये प्रार्थना-पत्र के आधार पर पुनः प्रवेश लेकर अध्ययन करने की संस्तुति का अवलोकन एवं अनुमोदन।**

विद्या परिषद द्वारा विश्वविद्यालय के शैक्षणिक सत्र 2016-17 में बी0टेक0 द्वितीय वर्ष (लैटरल इंट्री) के अन्तर्गत प्रवेशित छात्रों हरिशचन्द्र सिंह, रोल न0 - 2016032013 विद्युत अभि0 तथा ओमकार यादव, रोल न0-20160522014, यांत्रिक अभि0, जिनका सत्र 2016-17 का पंजीकरण, इनरोलमेंट हेतु अंतिम निर्धारित तिथि तक अनिवार्य प्रमाण-पत्र जमा न किये जाने के कारण निरस्त किया गया था। संदर्भित छात्रो द्वारा शैक्षिक सत्र 2017-18 में नामांकन करते हुए पुनः प्रवेश दिये जाने तथा सत्र 2016-17 में जमा फीस को 2017-18 में समायोजित किये जाने हेतु दिये गये प्रार्थना-पत्रों पर व्यापक विचार-विमर्श के पश्चात शैक्षणिक क्रियाकलाप समिति की 11वीं बैठक में लिए गये निर्णय को शैक्षणिक क्रियाकलाप समिति की 13वीं बैठक में अवक्रमित करते हुए छात्रहित में दी गयी निम्नवत् संस्तुति का संज्ञान लिया गया:-

> **" सत्र 2016-17 में पजीकरण निरस्त होने के उपरान्त छात्रों को सत्र 2017-18 में नामांकन कराते हुए बी0टेक0 तृतीय वर्ष के समतुल्य फीस जमा करा कर पुनः प्रवेश लेकर अध्ययन करने की संस्तुति की जाती है"**

विद्या परिषद द्वारा उपरोक्त प्रकरण में शैक्षणिक क्रियाकलाप समिति द्वारा की गयी संस्तुति पर अनुमोदन प्रदान किया गया तथा भविष्य में इस प्रकार की परिस्थिति उत्पन्न होने पर प्रकरणवार (case to case) विद्या परिषद के अनुमोदन के पश्चात ही कार्यवाही किये जाने की अपेक्षा की गई।

8.16 **शैक्षणिक क्रियाकलाप समिति की तेरहवीं बैठक में विश्वविद्यालय के छात्रों को प्रवजन प्रमाण-पत्र (Migration Certificate) व उपाधि प्रमाण-पत्र (Degree Certificate) के निर्गमन के सम्बन्ध में तैयार किये गये नियमों का अवलोकन एवं अनुमोदन।**

विद्या परिषद ने शैक्षणिक क्रियाकलाप समिति की तेरहवीं बैठक में विश्वविद्यालय के छात्रों को प्रवजन प्रमाण-पत्र (Migration Certificate) व उपाधि प्रमाण-पत्र (Degree Certificate) के निर्गमन के सम्बन्ध में तैयार किये गये नियमों का अवलोकन करते हुए आंशिक संशोधन सहित उक्त पर अनुमोदन प्रदान किया गया। (संलग्नक-2 एवं 3)

8.17 **विश्वविद्यालय के रासायन अभियांत्रिकी विभाग के द्वितीय वर्ष के सैलेबस एवं कोर्स स्ट्क्चर पर विचार व अनुमोदन।**

विद्या परिषद द्वारा रासायन अभियांत्रिकी विभाग के द्वितीय वर्ष के सैलेबस एवं कोर्स स्ट्क्चर पर अनुमोदन प्रदान किया। (संलग्नक-4)

8.18 **दिनांक 8 अप्रैल, 2017 को सम्पन्न विश्वविद्यालय के परीक्षा समिति की पंचम बैठक के कार्यवृत्त का अवलोकन एवं अनुमोदन।**

विद्या परिषद द्वारा परीक्षा समिति के कार्यवृत्त के मद संख्या - 5.12 को विद्या परिषद की अष्ठम बैठक के मद संख्या - 8.21 के आलोक में अवक्रमित करते हुए अनुमोदन प्रदान किया गया।

8.19 **विश्वविद्यालय के छात्र/छात्राओं के सेवायोजन की अद्यतन स्थिति का प्रस्तुतिकरण।**

विद्या परिषद ने विश्वविद्यालय के छात्र/छात्राओं के सेवायोजन की अद्यतन स्थिति का संज्ञान लिया। साथ ही साथ भविष्य में एक ब्रांन्च से सेवायोजन हेतु प्रतिभाग करने वाले कुल छात्रों की संख्या, सेवायोजन हेतु एक ब्रांन्च से कुल अर्ह छात्रों की संख्या को भी रिपोर्ट में समाहित करते हुए प्रस्तुतिकरण तैयार करने की अपेक्षा की गयी। परिषद द्वारा यह भी सुझाव दिया गया कि विश्वविद्यालय के पुरातन छात्र/छात्राओं से सम्पर्क स्थापित कर अधिक से अधिक छात्रों को सेवायोजन के अवसर प्रदान करने पर विशेष जोर दिया जाय।

8.20 **विश्वविद्यालय के संशोधित शोध अध्यादेश** (Ph.D. Ordanance) **पर विचार एवं अनुमोदन।**

विद्या परिषद द्वारा विश्वविद्यालय के संशोधित शोध अध्यादेश (Revised Ph.D. Ordanance) के उपधारा 6.5.7.1 में आंशिक संशोधन सहित अनुमोदन प्रदान किया गया तथा संशोधित शोध अध्यादेश शैक्षणिक सत्र 2017-18 से प्रवेश लेने वाले छात्र/छात्राओं पर लागू किये जाने का भी अनुमोदन प्रदान किया गया। (संलग्नक-5)

8.21 **विश्वविद्यालय के स्नातक तथा परास्नातक अध्यादेश के कतिपय बिन्दुओं में संशोधन पर विचार एवं अनुमोदन।**

विद्या परिषद द्वारा विश्वविद्यालय के स्नातक तथा परास्नातक अध्यादेश के कतिपय बिन्दुओं में संशोधन हेतु अनुमोदन प्रदान किया गया तथा संशोधित अध्यादेश शैक्षणिक सत्र 2017-18 से प्रभावी किये जाने का भी अनुमोदन प्रदान किया गया। (संलग्नक-6)

8.22 **विश्वविद्यालय के विभिन्न शैक्षणिक विभागों के इच्छुक संकाय सदस्यों को विश्वविद्यालय के Ph.D. अध्यादेश के आलोक में विश्वविद्यालय से पार्ट टाइम Ph.D. करने हेतु अनुमोदन।**

विद्या परिषद द्वारा विश्वविद्यालय के विभिन्न शैक्षणिक विभागों के इच्छुक संकाय सदस्यों की सूची को अद्यतन करते हुए विश्वविद्यालय के Ph.D. अध्यादेश के आलोक में विश्वविद्यालय से पार्ट टाइम Ph.D. करने हेतु अनुमोदन किया गया।

8.23 **शैक्षणिक सत्र 2018-19 से निम्न पाठ्यक्रमों को प्रारम्भ किये जाने पर विचार एवं अनुमोदनः-**

1. **B.Tech. in Architecture & Planning**
2. **B.Pharma**
3. **Two Years M.Sc. Programme in Applied Physics**

विद्या परिषद द्वारा विश्वविद्यालय के आगामी शैक्षणिक सत्र 2018-19 से प्रारम्भ किये जाने वाले पाठ्यक्रमों में क्रमांक 03 पर अंकित पाठ्यक्रम के नाम को Two Years M.Sc. Programme in Applied Physics के स्थान पर M.Sc. Physics (Specialization in Electronics) करते हुए प्रारम्भ करने के लिए अनुमोदन प्रदान किया गया।

8.24 **वाह्य परीक्षक के रूप में Assistant Professor या उससे ऊपर के कैडर के IITs/NITs एवं प्रतिष्ठित शिक्षकों की नियुक्ति पर विचार एवं अनुमोदन।**

विद्या परिषद द्वारा आगामी शैक्षिक सत्र से वाह्य परीक्षक के रूप में Assistant Professor या उससे ऊपर के कैडर के IITs/NITs एवं प्रतिष्ठित शिक्षकों की नियुक्ति पर अनुमोदन प्रदान किया गया।

8.25 **विश्वविद्यालय के द्वितीय दीक्षान्त समारोह को आयोजित किये जाने के लिए माननीय कुलाधिपति महोदय द्वारा निर्धारित तिथि का अवलोकन।**

विद्या परिषद द्वारा विश्वविद्यालय के द्वितीय दीक्षान्त समारोह को आयोजित किये जाने के लिए माननीय कुलाधिपति महोदय द्वारा निर्धारित तिथि दिनांक 11 सितम्बर, 2017 का अवलोकन किया गया।

8.26 **अध्यक्ष महोदय की अनुमति से अन्य मद।**

8.26.1 **विश्वविद्यालय के कम्प्यूटर साइंस एण्ड इंजी0 विभाग के शिक्षक श्री मनीष कुमार श्रीवास्तव, सहायक आचार्य के शैक्षिक योग्यता संबंधी प्रकरण पर विचार।**

श्री मनीष कुमार श्रीवास्तव, सहायक आचार्य, कम्प्यूटर साइंस एण्ड इंजी0 विभाग द्वारा प्रस्तुत प्रार्थना-पत्र पर सम्यक विचार किया गया। पत्र के माध्यम से मनीष कुमार श्रीवास्तव द्वारा अवगत कराया है कि उन्होने एम0टेक0 हेतु QIP प्रोग्राम के अन्तर्गत आई0आई0टी0, दिल्ली में शैक्षिक सत्र 2008-09 प्रवेश लिया था। नियमानुसार एम0टेक0 पाठ्यक्रम सफलतापूर्वक पूर्ण करने के लिए न्यूनतम 60 क्रेडिट अर्जित करना आवश्यक था। अपरिहार्य कारणों से श्री श्रीवास्तव मेजर प्रोजेक्ट पार्ट-2 के 12 क्रेडिट अर्जित नही कर सकें जिसके कारण आई0आई0टी0, दिल्ली द्वारा उनको एम0टेक0 के स्थान पर डिप्लोमा प्रदान कर दिया गया।

चुंकि श्री मनीष कुमार श्रीवास्तव इस विश्वविद्यालय के एकमात्र बी0टेक0 योग्यताधारी शिक्षक रह गये है। अतः विशेष परिस्थिति में इनके प्रकरण पर सहानूभूतिपूर्वक विचार करते हुए इन्हें इस विश्वविद्यालय के एम0टेक0 (कम्प्यूटर साइंस एण्ड इंजी0) पाठ्यक्रम करने हेतु निम्न शर्तो के साथ अनुमोदन प्रदान किया गया:-

1. श्री मनीष कुमार श्रीवास्तव अपने विश्वविद्यालय संबंधी दायित्वों का निर्वहन पूर्ववत करते हुए एम0टेक0 (कम्प्यूटर साइंस एण्ड इंजी0) का पाठ्यक्रम पूर्ण करेगें तथा इनको प्रति सेमेस्टर न्यूनतम 12 क्रेडिट के पाठ्यक्रम का पंजीकरण करना होगा।
2. श्री मनीष कुमार श्रीवास्तव द्वारा विश्वविद्यालय के एम0टेक0 (कम्प्यूटर साइंस एण्ड इंजी0) पाठ्यक्रम हेतु निर्धारित शुल्क जमा किया जायेगा।
3. चुंकि श्री मनीष कुमार श्रीवास्तव, सहायक आचार्य, कम्प्यूटर साइंस एण्ड इंजी0 विभाग को विशेष परिस्थिति में एम0टेक0 (कम्प्यूटर साइंस एण्ड इंजी0) पाठ्यक्रम में अध्ययन करने हेतु अनुमोदन प्रदान किया जा रहा है अतः इसे भविष्य के लिए दृष्टांत नही समझा जाय।

8.26.2 **विश्वविद्यालय के शिक्षकों को प्रोफेशनल सोसाइटी की सदस्यता हेतु विश्वविद्यालय स्तर से आर्थिक सहायता पर विचार।**

विश्वविद्यालय के शिक्षकों को प्रोफेशनल सोसाइटी की आजीवन/वार्षिक सदस्यता हेतु विश्वविद्यालय स्तर से आर्थिक सहयोग दिये जाने पर विचार किया गया तथा निर्णय लिया गया कि प्रोफेशनल सोसाइटी की आजीवन/वार्षिक सदस्यता हेतु शिक्षकों द्वारा पूर्ण विवरण सहित आवेदन प्राप्त किया जायेगा। प्रत्येक शिक्षक को प्रोफेशनल सोसाइटी की आजीवन/वार्षिक सदस्यता प्राप्त करने हेतु जो खर्च आयेगा उसका 75% अथवा रू0 5000.00 जो भी कम होगा वह धनराशि शिक्षक द्वारा आवेदन करने एवं पूर्ण अभिलेख उपलब्ध कराने के उपरान्त प्रत्येक शिक्षक को एक सदस्यता के लिए विश्वविद्यालय द्वारा प्रतिपूर्ति की जायेगी।

8.26.3 **विश्वविद्यालय के छात्रों को दिये जाने वाले प्रवजन प्रमाण-पत्र (Migration Certificate) तथा उपाधि प्रमाण-पत्र (Degree Certificate) के प्रारूप का अवलोकन एवं अनुमोदन।**

विश्वविद्यालय के छात्रों को दिये जाने वाले प्रवजन प्रमाण-पत्र (Migration Certificate) तथा उपाधि प्रमाण-पत्र (Degree Certificate) के प्रारूप का आंशिक संशोधन सहित अनुमोदन प्रदान किया गया। (संलग्नक-7 एवं 8)

बैठक अन्त में अध्यक्ष महोदय को धन्यवाद ज्ञापन सहित समाप्त हुई।

14/7/17

(यू0 सी0 जायसवाल)
सचिव
कुलसचिव, मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर

अनुमोदित

14.7.17

(प्रो0 श्री निवास सिंह)
अध्यक्ष
कुलपति, मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय, गोरखपुर

ACADEMIC SECTION

MADAN MOHAN MALAVIYA UNIVERSITY OF TECHNOLOGY, GORAKHPUR (UP)

Academic Calendar, Session 2017-18

Date	Days	Activities
July 5-July 19, 2017	Wed-Wed	Online Registration fee deposit (DD for educational loan)
July 21, 2017	Fri	Registration of 4th & 3rd year B.Tech./MCA students
July 22, 2017	Sat	Registration of 2nd year B.Tech./M.Tech/MBA/MCA Year and Ph.D. 3rd & 2nd year students
July 24, 2017	Mon	Commencement of Classes of ODD Semester
July 24, 2017	Mon	Reporting of B.Tech. 2nd year lateral entry and 1st Year MCA/MBA/M.Tech/Ph.D. students
July 25, 2017	Tue	Reporting of B.Tech. 1st Year students
July 26, 2017	Wed	Orientation programme for newly admitted students
July 27, 2017	Wed	commencement of classes for newly admitted students
July 29, 2017	Sat	Reporting with online Late Fee deposit of Rs.3000/- (*for old students*)
August 11, 2017	Fri	Last date for the drop of subject
September 11-16, 2017	Mon-Sat	Minor Test (Unit-I & Unit II)
September 18-23, 2017	Mon-Sat	Minor Test Viva-Voce during Practical Classes (*for practical & theory and practical based subjects)*
September 23, 2017	Sat	Last Date for showing the evaluated Answer Books of Minor Test
September 23, 2017	Sat	Last Date for Mid-Semester presentation of B.Tech. Project/M.Tech. dissertation
Sept. 27-Oct. 2, 2017	Wed-Mon	Mid Semester Break
October 31, 2017	Tue	Last date for industrial visit for B.Tech. III Year students
November 3, 2017	Fri	Last date for Student's online feedback
November 10, 2017	Fri	Last Date for End-Semester presentation of B.Tech. project/M.Tech. dissertation
November 18, 2017	Mon	Last Date for Odd Semester Classes
November 20, 2017	Mon	Start of End Semester Theory Examination (Entire Syllabus)
November 30, 2017	Wed	Last Date for DRC meeting for Ph.D. students/ Submission of Theory and Practical Sessional Marks
December 4, 2017	Mon	Start of Practical Examination
December 11, 2017	Mon	Last Date for showing Evaluated Answer Booklets of End Semester Theory Examination
December 12-21, 2017	Tue-Thu	End Semester Break for Faculty Members #
December 12-23, 2017	Tue-Tue	Online Registration fee deposit of Rs. 100/-
December 26, 2017	Tue	Registration of All students
December 27, 2017	Wed	Commencement of Classes of EVEN Semester
January 2, 2018	Tue	Registration with online late Fee deposit of Rs.3000/-
January 12, 2018	Fri	Last date for the drop of subject
February 12-19, 2018	Mon-Mon	Minor Test (Unit-I & Unit II)
February 20-26, 2018	Tue-Mon	Minor Test Viva-Voce during Practical Classes (*for practical & theory and practical based subjects)*
February 24, 2018	Sat	Last Date for Mid-Semester presentation of B.Tech. Project/M.Tech. dissertation
February 27, 2018	Tue	Last Date for showing the evaluated Answer Books of Minor Test
Feb. 28-March 4, 2018	Sat-Wed	Mid Semester Break
March 31, 2018	Tue	Last date for industrial visit for B.Tech. II Year students
April 13, 2018	Fri	Last Date for pre-submission presentation of B.Tech. project / M.Tech. dissertation
April 13, 2018	Fri	Last date for Student's online feedback
April 20, 2018	Fri	Start of End Semester Theory Examination (Entire Syllabus)
April 30, 2018	Mon	Start of Practical Examination/ Last date for submission of Theory and Practical sessional marks
May 10, 2018	Thu	Last Date for M.Tech. dissertation submission
May 11, 2018	Fri	Last Date for showing evaluated Answer Booklets of End Semester theory examination
May 15 – July 15, 2018	Tue-Sun	Summer Term for weaker students
May 15 - July 5, 2018	Tue-Thu	Summer Vacation for Faculty Members#
May 21, 2018	Mon	Last date for declaration of semester results
May 31, 2018	Thu	Last date for DRC meeting of Ph.D. students/M.Tech. dissertation viva
July 20, 2018	Fri	Commencement of ODD Semester

on request by the faculty members

Note:

(i). One extra period is assigned from 8.35-9.30 am for the compensatory/extra classes. Teacher shall keep the record of the same.

(ii). The attendance in all classes and other related activities should be strictly adhered to as per the University Ordinances. No relaxation in attendance beyond stipulated limit is admissible under any circumstances.

(iii). In case of extra holiday declaration by the State Government/University, the respective day of teaching will be compensated through zero hours or substituting time table as notified by the Academic Section

11.07.17

Office of the Council of Students Activities
MMM University of Technology Gorakhpur

Co-curricular activities Calendar for session 2017-18

ODD Semester		
August 15, 2017	Tuesday	Run for freedom, Football/Kabaddi Match
August 26, 2017	Saturday	Malaviyan ACE Competition (level-1) (after class hours)
August 27, 2017	Sunday	Malaviyan ACE Competition (level-2) (after class hours)
Sep. 18-20, 2017	Mon-Wed	Inter Year Hockey Tournament/Softball Cricket Tournament (after class hours)
Sept. 22-24, 2017	Fri-Sun	Techsrijan
October 02, 2017	Monday	Gandhi Jayanti Celebration
October 14, 2017	Saturday	Malaviyan ACE Competition (Major)
October 22, 2017	Sunday	Student Society activities of different departments
October 23-26, 2017	Mon-Thu	Inter Year Football Tournament/ Smash Tournament (Badminton, TT, Carrom, Chess), (after class hour)
November 2-4, 2017	Thu-Sat	Arunodaya Literary activities (after class hour)
December 01, 2017	Friday	University Foundation Day Celebration
EVEN Semester		
December 24-25, 2017	Wed-Thu	Alumni meet
January 06, 2018	Saturday	Debate Competition (after class hour)
January 13, 2018	Saturday	Spell CZAR Competition (after class hour)
January 19-20, 2018	Fri-Sat	ABHIPRERAN Career Counseling for first year students (after class hour)
January 26, 2018	Friday	Run for Unity/Facilitation of Certificate of Merit/Award
March 9-10, 2018	Fri-Sat	55th Annual Sports Meet
March 19-20, 2018	Mon-Tue	Inter Year Volleyball Tournament (after class hour)
March 21-24, 2018	Wed-Sat	Abhivaykti and Udgar
March 30-April 01, 2018	Fri- Sun	Robomania
April 7, 2018	Saturday	Student Society activities at department level
June 21, 2018	Thursday	International Yoga Day

CHAIRMAN
Council of Student activities
M.M.M.U.T., Gorakhpur

MADAN MOHAN MALAVIYA UNIVERSITY OF TECHNOLOGY
GORAKHPUR-273 010, INDIA

RULES FOR ISSUE OF MIGRATION CERTIFICATE

The students desiring to obtain the Migration Certificates from the University for further studies in any other University / any other purpose should apply to the controller of examination of the University.

ELIGIBILITY & PROCEDURE

1. Migration Certificate is not issued in favour of a student whose name has not been enrolled under this University.
2. Migration Certificate is not issued in favour of a student who has appeared in any examination under this University but the results of the same has not been published. In such a case, Migration Certificate will be issued only after the results have been published.
3. Delivery of Migration Certificate will be made to the concerned student only or sent by registered post at the permanent address of student as indicated by him in application form upon his/her request. Alternatively, it can be issued to some faculty in case of written authorization letter by the student, only after the issuing office is satisfied with genuinity.
4. The migration certificate will be issued within 3 to 5 (three to five) working days after the receipt of complete request if there is no other complication, excluding Saturday/Sunday or any other holiday
5. Students who seek migration without completing the course will have to submit their University leaving certificate
6. The duly completed application form should be signed and stamped by the respective Head of the Department/Centre/School.
7. A student will not be issued a Migration Certificate more than once. However if the original Migration Certificate issued to a student has been lost irrecoverably, a duplicate will be issued on remittance of Rs.500/- towards fee together with an application . An affidavit worth Rs.50/- of the Notary Public to the effect that the original Migration Certificate issued to the student has been lost irrecoverably and that it has not been utilized for the purpose for which it was issued may also be accompanied by the application.

HOW TO APPLY FOR MIGRATION CERTIFICATE

There is a prescribed application form. This has to be filled in and submitted along with the attested copies of the relevant documents.

Document Required

1. Photocopy of Degree
2. Photocopy of All Mark-Sheets
3. Bank draft containing the requisite fee/online payment receipt subject to verification by the University

All the documents should be self-attested. Students are advised to bring his/her original documents for verification at the time of submission of request.

FEE STRUCTURE

Students seeking Migration Certificate will have to submit fee as per following details.

If requested within 01 Years	Rs. 200/-
If requested after 01 years and onwards	Rs. 1000/-

1. Fee once remitted will not be refunded.
2. The fee for the issue of a Migration Certificate should be deposited by a bank draft/online in favour of **"Controller of Finance, M. M. M. University of Technology, Gorakhpur"** payable at Gorakhpur.
3. No Money Order/Cash will be accepted by the University.
4. The University reserves right to make changes in the fee at any time in its absolute discretion.

Madan Mohan Malaviya University of Technology
Gorakhpur-273 010, India

APPLICATION FOR MIGRATION CERTIFICATE

Full Name of the Student in Block Letters (according to the Registration)	
Name in Hindi Script	
Name of the Student's Father	
Name of the Student's Mother	
Registration & Enrolment Number with the Year of Registration with this University	
Sex	
Address of the Student	
Whether Completed the Course or Discontinued.	
Month & Year of Admission	
Month & Year of Qualifying Examination Passed / Discontinued	
The Name of Different Examinations of This University He/ She Passed or Appeared	1. 2. 3.
Migration Fee Submission Details	
Contact Number	
e-mail id	
Migration Certificate Collection Details	Self/by Registered Post at Permanent Address/Authorized Faculty
(Signature of the Student)	Signature of the Head of Department with His/Her Official Seal under this University where the Student studied last.

Forwarded to the Controller of Examination, MMMUT, Gorakhpur for necessary action.

This is to certify that Mr./Ms._____ has

1.

Successfully completed the Course work for the award of degree of B.Tech//M.Tech/MCA/MBA/PhD in _____ during the academic year from _____ to _____. All the Original marks cards of the student are verified.

OR

2.

Discontinued the Course.

This department has no objection to issue Migration Certificate to the student.

Date: Signature of the Head of Department

Approved

MADAN MOHAN MALAVIYA UNIVERSITY OF TECHNOLOGY
GORAKHPUR-273 010, INDIA

RULES FOR ISSUE OF DEGREE CERTIFICATE

The bonafide students of the University, who have not taken their degree in their convocation, should apply to the Controller of Examination of the University following the procedure as detailed below.

ELIGIBILITY & PROCEDURE

1. Degree Certificate is not issued in favour of a student who has appeared in any examination under this University but the results of the same has not been published. In such a case, Degree Certificate will be prepared and issued only after the results have been published and in forthcoming convocation.
2. Delivery of Degree Certificate will be made to the concerned student only or sent by registered post at the permanent address of student as indicated by him in application form/registration form upon his/her explicit written request. Alternatively, it can be issued to some faculty member in case of written authorization letter by the student, only after the issuing office is satisfied with genuinity.
3. The Degree certificate will be issued within 3 to 5 (three to five) working days after the receipt of complete request if there is no other complication, excluding Saturday/Sunday or any other holiday
4. The duly complete application form for the issue of Degree Certificate should be got forwarded and recommended by the respective Head of the Department/Centre/School.
5. A student will not be issued a Degree Certificate more than once. However if the original Degree Certificate issued to a student has been lost irrecoverably, a duplicate will be issued on remittance of Rs.1000/- towards fee together with an application. An affidavit worth Rs.100/- of the Notary Public to the effect that the original Degree Certificate issued to the student has been lost irrecoverably and that it has not been utilized for the purpose for which it was issued may also be accompanied by the application. Duplicate Degree Certificate will not be issued unless original Degree Certificate has not been issued

HOW TO APPLY FOR DEGREE CERTIFICATE

There is a prescribed application form. This has to be filled in and submitted along with the attested copies of the relevant documents.

Document Required

1. Photocopy of Provisional Degree Certificate
2. Photocopy of All Mark-Sheets
3. Bank draft containing the requisite fee/online payment receipt subject to verification by the University
4. No Dues Certificate

All the documents should be self-attested. Students are advised to bring his/her original documents for verification at the time of submission of request.

FEE STRUCTURE

Students seeking Degree Certificate will have to submit fee as per following details.

In Convocation	Rs 1000 out of which Rs. 800 is refunded.
If requested within 01 Years and onwards	Rs. 3000/-

1. Fee once remitted will not be refunded.
2. The fee for the issue of a Degree Certificate should be deposited by a bank draft/online in favour of **"Controller of Finance, M. M. M. University of Technology, Gorakhpur"** payable at Gorakhpur.
3. No Money Order/Cash will be accepted by the University.
4. The University reserves right to make changes in the fee at any time in its absolute discretion.

Madan Mohan Malaviya University of Technology
Gorakhpur-273 010, India

APPLICATION FOR DEGREE CERTIFICATE

Full Name of the Student in Block Letters (according to the Registration)	
Name in Hindi Script	
Name of the Student's Father	
Name of the Student's Mother	
Registration & Enrolment Number with the Year of Registration with this University	
Sex	
Address of the Student for dispatch of Certificate	
Whether Completed the Course or Discontinued.	
Month & Year of Admission	
Month & Year of Qualifying Examination Passed / Discontinued	
The Name of Examinations of This University He/ She Passed	
Degree Fee Submission Details	
Contact Number	
e-mail id	
Degree Certificate Collection Details	Self/by Registered Post at Permanent Address/Authorized Faculty
(Signature of the Student)	Signature of the Head of Department with His/Her Official Seal under this University where the Student studied last.

Forwarded to the Controller of Examination, MMMUT, Gorakhpur for necessary action.

This is to certify that Mr./Ms._____ has
1.
Successfully completed the Course work for the award of degree of B.Tech//M.Tech/MCA/MBA/PhD in _____ during the academic year from _____ to _____.

This department has no objection to issue Degree Certificate to the student.

Date: Signature of the Head of Department

CHEMICAL ENGINEERING DEPARTMENT
M. M. M. UNIVERSITY OF TECHNOLOGY
GORAKHPUR

Overall Credit Structure for B.Tech. Programme

Credit Courses			
Undergraduate Core (UC)		Undergraduate Electives (UE)	
Category	Min. credits	Category	Min. credits
Basic Sciences & Maths (BSM)	36	Program Electives (PE)	16
Engineering Fundamentals (EF)	24	Open Electives (OE) (Other Departments)	3
Department Core (DC)	78	Humanities & Social Science Electives (HSSE)	3
Management (M)	6		
Humanities & Social Science Core (HSSC)	4		
Project (P)	10		
Total	**158**	**Total**	**22**
		Grand Total	**180 (min.)**
Audit Courses			
Audit Courses (Other Departments)			16 (min.)
Seminar			3
Industrial/Practical Training (IT)			1
		Grand Total	**20 (min.)**

Credit Structure ofB. Tech. Chemical Engineering with Specialization in Sugar and Alcohol Technology

Category / Semesters	I	II	III	IV	V	VI	VII	VIII	Total
Basic Sciences & Maths (BSM)	14	14	9	-	-	-	-	-	37
Engineering Fundamentals (EF)	7	6	6	6	-	-	-	-	25
Department Core (DC)	-	-	9	13	18	20	13	5	78
Management (M)	-	-	-	3	3	-	-	-	6
Humanities & Social Science Core (HSSC)	4	-	-	-	-	-	-	-	4
Project (P)	-	-	-	-	-	-	5	5	10
Program Electives (PE)	-	-	-	-	-	4	4	8	16
Open Electives (OE)	-	-	-	-	-	-	-	4	4
Humanities & Social Science Electives (HSSE)	-	3	-	-	-	-	-	-	3
	25	23	24	22	21	24	22	22	183

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Freshman Year, Semester-I

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BAS-01	Engineering Mathematics-I	3	1	0	4
2.	BSM	BAS-02	Engineering Physics-I	3	1	2	5
3.	BSM	BAS-15	Applied Engineering Chemistry	3	1	2	5
4.	EF	BEE-01	Principles of Electrical Engineering	3	1	2	5
5.	HSSC	BAS-03	Professional Communication	3	1	0	4
6.	EF	BCE-10	Engineering Graphics	0	0	4	2
7.	AC		Audit Subject				
			Total	**15**	**5**	**10**	**25**

Freshman Year, Semester-II

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BAS-07	Engineering Mathematics-II	3	1	0	4
2.	BSM	BAS-08	Engineering Physics-II	3	1	2	5
3.	BSM	BAS-09	Engineering Chemistry	3	1	2	5
4.	EF	BCS-01	Introduction to Computer Programming	2	1	2	4
5.	HSSE	BAS-**	Humanities and Social Science Electives	2	1	0	3
6.	EF	BME-10	Workshop Technology	0	0	4	2
7.	AC		Audit Subject				
			Total	**13**	**5**	**10**	**23**

Sophomore Year, Semester-III

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BAS-31	Advanced Mathematics & Statistics	3	1	0	4
2.	BSM	BCT-11	Chemical Engineering Fluid Mechanics	3	1	2	5
3.	EF	BCT-12	Materials in Chemical Engineering	3	1	0	4
4.	DC	BCT-13	Chemical Engineering Process Calculations	3	1	0	4
5.	DC	BCT-14	Chemical Engineering Mechanical Operations	3	1	2	5
6.	EF	BAS-20	Communication Skills	0	0	4	2
7.	AC		Audit Subject				
			Total	**14**	**5**	**8**	**24**

Sophomore Year, Semester-IV

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	MBA-01	Industrial Management	2	1	0	3
2.	DC	BCT-15	Transport Phenomena	3	1	0	4
3.	DC	BCT-16	Sugar Technology	3	1	0	4
4.	DC	BCT-17	Heat Transfer Operation	3	1	2	5
5.	EF	BCT-18	Chemical Engineering Thermodynamics-I	3	1	0	4
6.	EF	BEE-20	Simulation Techniques	0	0	4	2
7.	AC		Audit Subject				
			Total	**14**	**5**	**6**	**22**

Junior Year, Semester-V

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	MBA-02	Engineering and Managerial Economics	2	1	0	3
2.	DC	BCT-26	Chemical Technology	3	1	0	4
3.	DC	BCT-27	Mass Transfer-I	3	1	0	4
4.	DC	BCT-28	Sugar Production	3	1	2	5
5.	DC	BCT-29	Chemical Engineering Thermodynamics-II	3	1	2	5
6.	AC		Audit Subject				
			Total	**15**	**5**	**6**	**21**

Note: The student is required to complete 10 days industrial training in Sugar Industries after V Semester.

Junior Year, Semester-VI

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC	BCT-31	Alcohol Technology	3	1	2	5
2.	DC	BCT-32	Mass Transfer-II	3	1	2	5
3.	DC	BCT-33	Process Dynamics, Control & Instrumentation	3	1	2	5
4.	DC	BCT-34	Chemical Reaction Engineering	3	1	2	5
5.	PE1	BCT-**	Program Elective-1	3	1	0	4
6.	AC	BCT-30	Seminar				-
			Total	**15**	**5**	**8**	**24**

Note: The student is required to complete 50-65 days industrial training in Process Industries after VI Semester and both training will be evaluated in Semester VII.

Senior Year, Semester-VII

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC	BCT-41	Process Equipment Design	3	1	2	5
2.	DC	BCT-42	Energy Resources & Applications	3	1	0	4
3.	DC	BCT-43	Chemical Control in Sugar Plant	3	1	0	4
4.	PE2	BCT-**	Program Elective-2	3	1	0	4
5.	P	BCT-40	Project Part-I	0	0	10	5
6.	AC	BCT-45	Industrial/Practical Training				-
			Total	**12**	**4**	**12**	**22**

Senior Year, Semester-VIII

S.N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC	BCT-46	Chemical Engineering Design	3	1	2	5
2.	PE3	BCT-**	Program Elective-3	3	1	0	4
3.	PE4	BCT-**	Program Elective-4	3	1	0	4
4.	OE	BOE-**	Open Elective	3	1	0	4
5.	P	BCT-50	Project Part-II	0	0	10	5
			Total	**12**	**4**	**12**	**22**

Humanities & Social Science Electives

S.N.	Paper Code	Subject	Prerequisite Subject	L	T	P	Credits
1.	BAS-11	Human Values & Professional Ethics	-	2	1	0	3
2.	BAS-12	Industrial Psychology	-	2	1	0	3
3.	BAS-13	Industrial Sociology	-	2	1	0	3

Engineering Fundamentals & Department Core (Chemical Engineering with Specialization in Sugar and Alcohol Technology)

S.N.	Paper Code	Subject	Prerequisite Subject	L	T	P	Credits
		Year-I					
1.	BCT-01	Applied Engineering Chemistry	-	3	1	0	4
		Year-II					
2.	BCT-11	Chemical Engineering Fluid Mechanics	-	3	1	2	5
3.	BCT-12	Materials in Chemical Engineering	-	3	1	0	4
4.	BCT-13	Chemical Engineering Process Calculations	-	3	1	0	4
5.	BCT-14	Chemical Engineering Mechanical Operations	-	3	1	2	5
6.	BCT-15	Transport Phenomena	-	3	1	0	4
7.	BCT-16	Sugar Technology	-	3	1	0	4
8.	BCT-17	Heat Transfer Operation	-	3	1	2	5
9.	BCT-18	Chemical Engineering Thermodynamics-I	-	3	1	0	4
		Year-III					
10.	BCT-26	Chemical Technology	-	3	1	0	4
11.	BCT-27	Mass Transfer-I	-	3	1	0	4
12.	BCT-28	Sugar Production	-	3	1	2	5
13.	BCT-29	Chemical Engineering Thermodynamics-II	-	3	1	2	5
14.	BCT-31	Alcohol Technology	-	3	1	2	5
15.	BCT-32	Mass Transfer-II	BCT-27	3	1	2	5
16.	BCT-33	Process Dynamics, Control & Instrumentation	-	3	1	2	5
17.	BCT-34	Chemical Reaction Engineering	-	3	1	2	5
		Year-IV					
18.	BCT-40	Project Part-I	-	0	0	10	5
19.	BCT-41	Process Equipment Design	-	3	1	2	5
20.	BCT-42	Energy Resources & Applications	-	3	1	0	4
21.	BCT-43	Chemical Control in Sugar Plant	-	3	1	0	4
22.	BCT-45	Industrial Practical Training	-	0	0	2	1
23.	BCT-46	Chemical Engineering Design	-	3	1	2	5
24.	BCT-50	Project Part-II	BCT-40	0	0	10	5

Program Electives (Chemical Engineering)

S.N.	Paper Code	Subject	Prerequisite Subject	L	T	P	Credits
		PE-1 (VI Semester)					
1.	BCT-51	Process Integration	-	3	1	0	4
2.	BCT-52	Piping Design	-	3	1	0	4
3.	BCT-53	Statistical Design of Experiments	-	3	1	0	4
4.	BCT-54	Process Flow Sheet Simulation	-	3	1	0	4
5.	BCT-55	Food Technology	-	3	1	0	4
		PE-2 (VII Semester)					
1.	BCT-61	Fertilizer Technology	-	3	1	0	4
2.	BME-62	Nuclear Engineering	-	3	1	0	4
3.	BCT-63	Computational Fluid Dynamics	-	3	1	0	4
4.	BCT-55	Total Quality Management	BCT11	3	1	0	4
		PE-3 & PE-4 (VIII Semester)					
1.	BCT-71	Heterogeneous Catalysis & Multiphase Reactor Design	BCT34	3	1	0	4
2.	BCT-72	Petroleum Engineering	-	3	1	0	4
3.	BCT-73	Polymer Science & Technology		3	1	0	4
4.	BCT-74	Optimization Techniques in Chemical Engineering	-	3	1	0	4
5.	BCT-75	Standardization & Quality Assurance in Chemical Industry	-	3	1	0	4
6.	BCT-76	Industrial Safety & Hazard Management	-	3	1	0	4
7.	BAS-22	Nano Technology	-	2	1	0	3
8.	BCT-77	Project Engineering & Management	-	3	1	0	4
9.	BCT-78	Bioprocess Engineering Principles	-	3	1	0	4
10.	BCT-79	Nuclear Reactor Technology	-	3	1	0	4

Audit Courses for B. Tech. (Chemical Engineering) Students

S.N.	Paper Code	Subject	Prerequisite Subject	L	T	P	Credits
		Year-I					
1.	BAS-04	Environmental Chemistry	-	3	1	0	4
2.	BAS-05	Environment & Ecology	-	2	1	0	3
3.	BME-02	Fundamentals of Mechanical Engineering	-	3	1	2	5
4.	BME-03	Manufacturing Processes		3	1	0	4
5.	BEC-01	Fundamentals of Electronics Engineering	-	3	1	2	5
6.	BAS-06	Space Sciences	-	2	1	0	3
		Year-II					
1.	BME-56	Energy Management	-	3	1	0	4
2.	BEE-16	Electromechanical Energy Conversion	-	3	1	2	5
3.	BEE-15	Introduction to Microprocessors	-	3	1	2	5
4.	MAS-109	Foreign Language-French	-	2	1	0	3
5.	MAS-110	Foreign Language-German	-	2	1	0	3
6.	MAS-111	Foreign Language-Spanish	-	2	1	0	3
		Year-III	-				
1.	BCS-73	Neural Network & Fuzzy Systems	-	3	1	0	4
2.	BCE-21	Environmental Impact Assessment & Management	-	3	1	0	4
3.	BCS-15	Database Management System	-	3	1	2	5

Paper Code		Subject	L	T	P	Credits
BCT-11	:	CHEMICAL ENGINEERING FLUID MECHANICS	3	1	2	5

COURSE OUTCOME

- *The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.*
- *Students will be able to apply Bernouli principle and compute pressure drop in flow systems of different configurations.*
- *Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed.*
- *Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices.*
- *Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump.*

Syllabus

UNIT 1

Units Dimensions & Dimensional Analysis, Definitions and Fluid Properties: Viscosity, Newton's Law of viscosity, Rheological Diagram, Kinematic Viscosity, No slip condition, Ideal Fluid, Normal Stresses on Fluid Element, Bulk Stress, Surface Tension and Capillarity, The Pressure Gradient in the absence of Shear Stresses, Compressible and Incompressible Flows. Fluid Statics: Stationary Fluid Bodies, Euler Equation and its application, Derivation of Bernoulli Equation from Euler Equation, Pascal's Law, Hydrostatic Law, Hydrostatic Paradox.

[10 Lectures]

UNIT 2

Measurement of Pressure, Definition of Gauge & Absolute Pressure, Barometer, Various Manometers, Fluid Dynamics: Eularian & Lagrangian View Point, Stream Lines & Path Lines, Stream Tubes, Substantial Derivative & Acceleration, Stream Function, Angular Velocity of a Fluid Element, Irrotational Flow, Circulation, Properties of Irrotational Flows & Potential Function. Flow around Immersed Bodies: Drag force, lift and drag coefficients, drag on Flat Plate, Circular Cylinder and Sphere.

[10 Lectures]

UNIT 3

Kinetics: System & Control Volume, Reynolds Transport Theorem. Integral Analysis: Continuity Equation, Linear Momentum Equation, Energy Equation, Engineering Bernoulli's Equation, Kinetic energy correction factor and momentum correction factor in Bernoulli's equation. Flow of Fluids through Pipes: Various Flow Regimes, Calculation of Pressure Drop in a Pipe, Minor Losses in Fittings, Equivalent Length & 'K' factor, Centrifugal decanter. Flow Measuring Equipment: Head Flow Meters, Nozzle Meter, Orifice Meter, Pitot Tube, Venturi Meter, Area Flow Meters, Rotameter.

[10 Lectures]

NIT 4

ydraulic pumps: Positive Displacement Pumps. Reciprocating Pumps. Rotary Pumps and crew Pumps. Centrifugal Pumps. Characteristic Curves of Centrifugal Pumps. NPSH. entrifugal pumps verses Reciprocating pumps pump losses and Efficiencies. Multistage umps. Work and power Input. Cavitation and maximum Suction lift, specific and minimum peed. [6 Lectures]

ooks

1. Unit Operations of Chemical Engineering: McCabe and Smith. TMC
2. Gupta, Vijay and S. K. Gupta, "Fluid Mechanics and its Applications", Wiley Eastern, New Delhi (1984).
3. Shames, I. H., "Mechanics of Fluids", McGraw-Hill, Inc.
4. Coulson, J. M. and Richardson, J.F., "Chemical Engineering, Volume I", Pergamon Press.
5. Jain, A. K., "Fluid Mechanics including Hydraulic Machines", Khanna Publishers, Delhi (2007).
6. Geankoplis, C. J., "Transport Processes and Unit Operations", Prentice-Hall Inc.

HEMICAL ENGINEERING FLUID MECHANICS LAB

- To find the flow rate using a V notch.
- To find the friction losses in a Straight and bend pipe.
- Study of Pipe fittings and Valves.
- To study the Reynolds apparatus and verify experimentally.
- To study the working principle of a reciprocating pump and to determine the percentage of slip.
- To study the working principle of a centrifugal pump and determine its efficiency experimentally.
- To find out the flow profile of water from hook's gauge and determination of coefficient of velocity, coefficient of discharge, coefficient of resistance, coefficient of contraction.
- To determine the pressure drop in a packed bed by Leva's and Ergun's equation and verify experimentally.
- To determine the minimum fluidization velocity in a fluidized/ tapered fluidized bed and verify experimentally.
- Determination of discharge coefficient with Reynolds Number in case of an orifice meter and a venturi meter.
- Study and verification of the flow pattern in a Bernoulli's apparatus.
- Determination of the mixing, fluidization and segregation index of the given sample of bed materials in a fluidized bed.

UNIT 4

Hydraulic pumps: Positive Displacement Pumps. Reciprocating Pumps. Rotary Pumps and Screw Pumps. Centrifugal Pumps. Characteristic Curves of Centrifugal Pumps. NPSH. Centrifugal pumps verses Reciprocating pumps pump losses and Efficiencies. Multistage pumps. Work and power Input. Cavitation and maximum Suction lift. specific and minimum speed.

[6 Lectures]

Books

1. Unit Operations of Chemical Engineering: McCabe and Smith, TMC
2. Gupta, Vijay and S. K. Gupta, "Fluid Mechanics and its Applications", Wiley Eastern, New Delhi (1984).
3. Shames, I. H., "Mechanics of Fluids", McGraw-Hill, Inc.
4. Coulson, J. M. and Richardson, J.F., "Chemical Engineering, Volume I", Pergamon Press.
5. Jain, A. K., "Fluid Mechanics including Hydraulic Machines", Khanna Publishers, Delhi (2007).
6. Geankoplis, C. J., "Transport Processes and Unit Operations", Prentice-Hall Inc.

CHEMICAL ENGINEERING FLUID MECHANICS LAB

1. To find the flow rate using a V notch.
2. To find the friction losses in a Straight and bend pipe.
3. Study of Pipe fittings and Valves.
4. To study the Reynolds apparatus and verify experimentally.
5. To study the working principle of a reciprocating pump and to determine the percentage of slip.
6. To study the working principle of a centrifugal pump and determine its efficiency experimentally.
7. To find out the flow profile of water from hook's gauge and determination of coefficient of velocity, coefficient of discharge, coefficient of resistance, coefficient of contraction.
8. To determine the pressure drop in a packed bed by Leva's and Ergun's equation and verify experimentally.
9. To determine the minimum fluidization velocity in a fluidized tapered fluidized bed and verify experimentally.
10. Determination of discharge coefficient with Reynolds Number in case of an orifice meter and a venturi meter.
11. Study and verification of the flow pattern in a Bernoulli's apparatus.
12. Determination of the mixing, fluidization and segregation index of the given sample of bed materials in a fluidized bed.

corrosion-modification of corrosive environment. Inhibitors. Cathodic protection. protective coatings. Corrosion charts.

[8 Lectures]

UNIT 4

Typical Engineering Materials: Ferrous metals. Nonferrous metals and alloys- Aluminum and its alloys. Copper and its alloys. Lead and its alloys. Tin. Zinc and its alloys. Alloys for high temperature service. Ceramic materials- Structure of ceramic. Polymorphism. mechanical. electrical and thermal properties of ceramic phase. Smart materials. biomaterials. nanomaterials.

[08 Lectures]

Books:

1. "Material Science and Processes" Hajra Choudhary S. K., Indian Book Distributing Co., 1982.
2. "Material Science and Engineering - A First Course", Raghavan V., 3rd Edition, Prentice Hall of India Pvt. Ltd., New Delhi, 1996.
3. William D Callister, Material Science
4. "Elements of Materials Science", Van Vlack, H. L., 2nd Edition, Addision - Wesly Publishing Company, NY, 1964.
5. "Principles of Materials Science and Engineering" Navneet Gupta, Dhanpat Rai & Co.

Paper Code	Subject	L	T	P	Credits
BCT-13 :	PROCESS CALCULATION	3	1	0	4

COURSE OUTCOME

- *Ability to make material balances on unit operations and processes.*
- *Understanding of the concept of humidity and usage of psychometric chart.*
- *Ability to perform simultaneous material and energy balances in different chemical process.*
- *Understanding the role of energy and material balance in the different chemical processes.*

Syllabus

UNIT 1

Dimensions and system of units, Fundamental and derived units, Dimensional consistency, Dimensional equations, Different ways of expressing units of quantities and physical constant, Unit conversion and its significance. Calculations for mole, molecular weight, equivalent weight, etc., Composition of gaseous mixtures, liquid mixtures, solid mixtures, etc., Ideal gas law & other equations of state and their applications, Dalton law, Raoult's law, Henry's law, Solutions and their properties **[08 Lectures]**

UNIT 2

Stoichiometric Principles, Application of Material Balance to Unit Operations like Distillation, Evaporation, Crystallization, Drying etc., Material Balance with Chemical Reaction, Limiting and Excess Reactants, Recycle, Bypass and Purging. Unsteady State Material Balances, Calculation of Absolute Humidity, Molal Humidity, Relative Humidity and Percentage Humidity, Use of Humidity in Condensation and Drying. **[10 Lectures]**

UNIT 3

Concept of limiting and excess reactants, percentage conversion, yield, selectivity, etc., Material balance with chemical reactions - single and multiple reactions, Material balance involving reactions with special reference to fertilizers, petrochemicals, dyestuffs, electrochemical industries, sugar and alcohol industries, etc. Calculation of Excess Air from Orsat Technique and Problems. Heat Capacity of Solids, Liquids, Gases and Solutions, Use of Mean Heat Capacity in Heat Calculations. **[10 Lectures]**

UNIT 4

Standard Heat of Reaction, Heats of Formation, Combustion, Solution, Mixing etc., Calculation of Standard Heat of Reaction, Effect of Pressure and Temperature on Heat of Reaction, Energy Balance for Systems with and without Chemical Reaction, Unsteady State Energy Balances, Introduction to Computer Aided Calculations - Steady State Material and Energy Balances. **[08 Lectures]**

Books:

1. Bhatt, B. L., VORA, S. M., "Stoichiometry", Tata McGraw-Hill, 1976.
2. Hougen, O. A., Watson, K. M and Ragatz, R. A., "Chemical Process Principles Part-I", John Wiley and Asia Publishing, 1970.
3. Himmelblau, D. M., "Basic Principles and Calculations in Chemical Engineering", Fourth Edition, Prentice Hall Inc., 1982.
4. Whitwell, J. C., Tone, R. K. "Conservation of Mass and Energy ", McGraw-Hill, 1973.
5. Process Calculation for Chemical Engineering, Second Revised Edition, Chemical Engineering Education Development Centre, I.I.T., Madras, 1981.
6. Narayanan K. V. & Lakshmikutty B. "Stoichiometry and Process Calculations" PHI New Delhi

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Code		Subject	L	T	P	Credits
BCT-14	:	MECHANICAL OPERATIONS	3	1	2	5

COURSE OUTCOME

- *Identify the important physical mechanisms occurring in processes involving particles.*
- *Ability to understand fluid particle systems and equipment.*
- *Ability to select suitable size reduction equipment, solid-solid separation method and conveying system*
- *To understand basic principles of various mechanical operations, construction and working of the equipments.*
- *Discuss unit operation and its role in Chemical industries, characteristics of particulate solids, Principles of size reduction, particle dynamics and separation of particles.*

Syllabus

UNIT I

Particle Technology: Particle shape, Particle size, Different ways of Expression of Particle Size, Shape Factor, Sphericity, Mixed Particles Size Analysis, Size Reduction: Introduction – Types of Forces used for Communition, Criteria for Communition, Characteristics of Communited Products, Laws of Size Reduction, Work Index, Energy Utilization, Methods of Operating Crushers – Free Crushing, Choke Feeding, Open Circuit Grinding, Closed Circuit Grinding, Wet and Dry Grinding. Screens – Ideal and Actual screens, Differential and Cumulative size Analysis, Effectiveness of Screen, Specific Surface of Mixture of Particles, Standard Screens Industrial Screening Equipment, Grizzly, Gyratory Screen, Vibrating Screen, Trommels, Sub Sieve Analysis – Air Permeability Method, Sedimentation and Elutriation Methods.

[09 Lectures]

NIT 2

Equipment for Size Reduction – Blake Jaw Crusher, Gyratory Crusher, Smooth Roll Crusher, Tooth Roll Crusher, Impactor, Attrition Mill, Ball Mill, Critical Speed of Ball Mill, Ultra ine Grinders, Fluid Energy Mill, Colloid Mill, Cutters – Knife Cutter, Flow of Fluid Past mersed Bodies: Drag, Drag Coefficient, Pressure Drop – Kozeny – Carman Equation, ake- Plummer, Ergun Equation, Fluidization, Conditions for Fluidization, Minimum idization Velocity, Types of Fluidization, Application of Fluidization, Slurry Transport, eumatic Conveying, Motion of Particles Through Fluids: Mechanics of Particle Motion, ation for One Dimensional Motion of Particles through a Fluid in Gravitational and trifugal Field, Terminal Velocity, Drag Coefficient, Motion of Spherical Particles in ke's Region, Newton's Region and Intermediate Region, Criterion for Settling Regime, dered Settling.

[11 Lectures]

UNIT 3

Centrifugal Separators, Cyclones and Hydro Cyclones. Sedimentation: Batch Settling Test. Application of Batch Settling Test to Design of Continuous Thickener. Coe and Clevenger Theory. Kynch theory. Thickener Design. Determination of Thickener Area. Filtration: Introduction, Classification of Filtration. Cake Filtration, Clarification. Batch and Continuous Filtration. Pressure and Vacuum Filtration. Characteristics of Filter Media. Industrial Filters. Sand Filter. Filter Press. Leaf Filter. Rotary Drum Filter. Horizontal Belt Filter. Bag Filter. Centrifugal Filtration – Suspended Batch Centrifuge. Filter Aids. Application of Filter Aids. Principles of Cake Filtration.

[8 Lectures]

UNIT 4

Agitation And Mixing: Application of Agitation, Agitation Equipment, Types of Impellers – Propellers, Paddles and Turbines, Flow Patterns in Agitated Vessels, Prevention of Swirling, Standard Turbine Design, Power Correlation and Power Calculation, Mixing of Solids, Types of Mixers - Change Can Mixers, Muller Mixers, Mixing Index, Ribbon Blender, Internal Screw Mixer, Tumbling Mixer. Sampling, Storage and Conveying of Solids: Sampling of Solids, Storage of Solids, Open and Closed Storage, Bulk and Bin Storage, Conveyors – Belt Conveyors, Chain Conveyor, Apron Conveyor, Bucket Conveyor, Bucket Elevators, Screw Conveyor.

[8 Lectures]

Books:

1. Momentum transfer operation: S. K. Gupta, TMC, 1979.
2. Unit Operations of Chemical Engineering: McCabe and Smith, TMC
3. Chemical Engineering Vol. I: Coulson & Richardson, Pergamon Press, 1979
4. Chemical Engineering Vol. II: Coulson & Richardson, Pergamon Press, 2002

MECHANICAL OPERATIONS LAB

1. Determination of average particle size of a mixture of particles by sieve analysis.
2. Study and operation of Jaw crusher and thereby verification of Ritinger's constant.
3. Determination of reduction ratio, maximum feed size and theoretical capacity of crushing rolls.
4. Determination of the effect of no. of balls on grinding in a Ball mill and comparison of its critical speed with the operating speed.
5. To find out the effect of time on grinding and amount of undersize at zero time of grinding in a ball mill and to compare its operating speed with the critical speed.
6. To find out enrichment of the coal sample using a froth flotation cell.
7. Determination of the effectiveness of a vibrating screen.
8. To find the efficiency of Wilfley Table and the effect of water flow rate on efficiency of separation.
9. Study and operation of a Hammer mill thereby finding its reduction ratio.
10. Study and operation of a Pulverizer and thereby finding its reduction ratio.
11. Study and operation of a cyclone separator and thereby finding its efficiency of separation.

12. Study and operation of a Magnetic separator and thereby finding its efficiency of separation.
13. Study and operation of a Gyratory Crusher and thereby finding its reduction ratio.
14. To find the cake and filter medium resistance of Plate and Frame Filter press.
15. To find the filter medium resistance of a Vacuum Leaf Filters.
16. To study the principle of a hydro-cyclone and find out the efficiency of separation.

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Code	Subject	L	T	P	Credits
BCT-15	TRANSPORT PHENOMENA	3	1	0	4

COURSE OUTCOME

- *Understanding of transport processes and ability to analyze industrial problems along with appropriate boundary conditions*
- *All type of transport phenomena can be explained by similar transport and conversion laws. Physical properties which are used to describe transport laws like kinematic viscosity, thermal diffusivity or mass diffusivity play similar role.*
- *The mathematical requirements for solving problems related to transport phenomena are more or less similar.*
- *Ability to do heat, mass and momentum transfer analysis.*
- *This course may be taught at any time in an undergraduate chemical engineering program. The course may also be helpful to students of other disciplines.*

Syllabus

UNIT 1

Vectors/Tensors; Newton's law of viscosity, Temperature, pressure and composition dependence of viscosity, Kinetic theory of viscosity, Fourier's law of heat conduction, Temperature, pressure and composition dependence of thermal conductivity, Kinetic theory of thermal conductivity, Fick's law of diffusion, Temperature, pressure and composition dependence of diffusivity, Kinetic theory of diffusivity. **[09 Lectures]**

UNIT 2

Shell Momentum balances, velocity profiles, average velocity, momentum flux at the surfaces, Equations of Change (Isothermal), equation of continuity, equation of motion, equation of energy (isothermal). Shell energy balances, temperature profiles, average temperature, energy fluxes at surfaces, energy (non-isothermal). **[09 Lectures]**

UNIT 3

Equations of change (non-isothermal), equation of continuity, equation of motion for forced and free convection, equation of Shell mass balances, concentration profiles, average concentration, mass flux at surfaces. Equations of change (multi-component), equations of continuity for each species, equation of energy (multi-component). **[09 Lectures]**

UNIT 4

Introduction to the concept of heat and mass transfer coefficients. Interphase mass transfer, various coefficient of mass transfer and their determination, resistance concept, controlling phase concept. Mass transfer in turbulent flow, Analogies of mass transfer. Empirical equations. Theories of mass transfer, two film theory, Higbies penetration theory, Derivation of flux equation, surface renewal theory. **[08 Lectures]**

Text Book:

1. Byron, R. B., Stewart, W. E., Lightfoot, E. N., "Transport Phenomena", John Wiley & Sons, 1960.
2. Beek, W.J., Muttzall, K.M.K., Heuven, J.W.V., Transport Phenomena, 2nd Edition John Wiley & Sons

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er Code	Subject	L	T	P	Credits
CT-17	CHEMICAL ENGINEERING THERMODYNAMICS – I	3	1	0	4

COURSE OUTCOME

- Ability to apply fundamental concepts of thermodynamics to engineering applications
- Ability to estimate thermodynamic properties of substances in gas and liquid states
- Capability to determine thermodynamic efficiency of various energy related processes
- To understand the theory and applications of classical thermodynamics, thermodynamic properties, equations of state, methods used to describe and predict phase equilibrium.

Syllabus

UNIT 1

Fundamental concepts in Thermodynamics: Heat and Work, the First Law of Thermodynamics, Joule's Experiment, Internal Energy, State Functions, Enthalpy, Steady – State, Steady and Transient Flow Processes, Equilibrium and the Phase rule, Reversible processes, Processes at Constant Volume and Constant Pressure, Heat Capacities, Thermodynamic Analysis of Control Volume, Unsteady Flow Processes, Charging and Discharging of Vessel. Volumetric properties of pure fluids, P-V-T diagrams, Ideal gas, Virial equations and its Applications, Cubic Equations of State, Generalized Correlations for Gases and Liquids **[10 Lectures]**

UNIT 2

Thermal effects: Sensible Heat and Latent Heat. Standard Heat of Formation, Heat of Reaction and Heat of Combustion, Effect of the Temperature on the Heat of Reaction, Second Law of Thermodynamics, Statement of the Second Law, Heat Engines, Carnot Cycle, Thermodynamic Scale of Temperatures, Entropy Balance and Availability, Isentropic Efficiency, Maxwell Relations and Fluid Properties Estimation, Application to Flow Processes, the Third Law of Thermodynamics **[09 Lectures]**

UNIT 3

Single Phase Mixtures and Solutions; Ideal Solutions; Partial molar quantities: Gibbs-Duhem Equation; Criteria for Thermodynamic Equilibrium; Phase Equilibrium Criteria. Non-ideal Solutions; Residual and Excess Properties; Fugacity and Activity Coefficient models. Pure Component Phase Equilibria, Vapour-Liquid Equilibria (VLE), Raoult's Law and Modified Raoult's Law; High-Pressure VLE; Henry's law **[09 Lectures]**

UNIT 4

Thermodynamic Properties of Pure Fluids. Maxwell's Equations. Helmholtz and Gibbs Functions. Residual Properties. Two - Phase Systems. Tables and Diagrams of Thermodynamic Properties of Gases and Liquids. Cycles for Conversion of Heat into Power. Refrigeration and Liquefaction, Absorption Refrigeration. Rankine Cycle. Otto cycle. Diesel cycle. Gas Turbine Engine. Rocket Engine. Multistage Compression. Fundamental equations and relationships flow in pipes, nozzles. Single and Multistage compressors and ejectors.

[8 Lectures]

Books:

1. Smith, J. M., H. C. Van Ness & M. M. Abbot; "Introduction to chemical engineering thermodynamics" Tata McGraw Hill, New Delhi
2. Cengel, Yunus A. & Boles Michael A., "Thermodynamics An Engineering Approach." McGraw Hill.
3. Koretsky, Millo D., "Engineering and Chemical Thermodynamics" John Wiley & Sons (2004)
4. Pradeep Ahuja "Chemical Engineering Thermodynamics" PHI New Delhi

Paper Code		Subject	L	T	P	Credits
BCT-18	:	HEAT TRANSFER OPERATION	3	1	2	5

COURSE OUTCOME

- *Ability to understand and solve conduction problems.*
- *Ability to understand and solve convection and radiation problems.*
- *Ability to design and analyze the performance of heat exchangers and evaporators*
- *Ability to design and analyze reactor heating and cooling systems*
- *To understand the fundamentals of heat transfer mechanisms in fluids and solids and their applications in various heat transfer equipment in process industries.*

Syllabus

UNIT 1

Introduction to heat transfer and general concepts of heat transfer by conduction, convection and radiation. Conduction: Basic concepts of conduction in solids, liquids, gases, steady state temperature fields and one dimensional conduction without heat generation through plain walls, cylindrical and spherical surfaces and composite layers. Insulation materials, forms of insulation, critical and optimum insulation thickness.

Convective Heat Transfer: One dimensional- Principle of heat flow in fluids and concept of heat transfer coefficient, Individual and overall heat transfer coefficient, Heat transfer between fluids separated by a flat solid wall, cylindrical wall Enhanced heat transfer: concept of fins, Fin efficiency. **[8 Lectures]**

UNIT 2

Forced Convective Heat Transfer- Principle of convection, Forced convection mechanism: Flow over a flat horizontal plate, Flow through a pipe or tube in Laminar and Turbulent flow, Flow through a non-circular duct, Flow over a flat plate, Flow across a cylinder and sphere, Momentum and heat transfer analogies, Reynolds analogy, The Chilton-Colburn analogy, The Prandtl analogy, The Van Karman analogy.

Heat Transfer by Natural Convection- Empirical correlations for natural-convective heat transfer, Natural convection around a flat vertical plate, horizontal cylinder, horizontal flat surface, sphere, combined natural and forced convection

Heat Transfer in Boiling and Condensation- Heat transfer during boiling, Boiling of saturated liquid, Nucleation boiling, Maximum heat flux, Film boiling. Heat transfer during condensation. Film condensation, Condensation on a vertical tube and horizontal tubes. Condensation inside a horizontal tube. Condensation for packed and fluidized bed.

[11 Lectures]

UNIT 3

Radiation Heat Transfer- Basic definition pertaining to radiation, Emissive power, Radiosity, Irradiation, Absoptivity, reflectivity, and transmissivity, Blackbody radiation, Planck's law, Wien's law, The Stefan-Boltzmann law for blackbody, Kirchhoff's law, Grey body, Radiative heat exchanger between surfaces, View factor, Heat exchange between non blackbodies. Radiation combined with conduction and convection

Heat Exchangers- Elements of shell and tube heat exchanger. Thermal design of heat exchangers. Overall heat transfer coefficient. Fouling factor or dirt factor. Temperature profiles in heat exchangers. Why multi-pass exchangers, LMTD correction factor. Individual

heat transfer coefficient, Pressure drop in the heat exchanger. Correlation for tube side pressure drop, Correlation for shell side pressure drop. Heat transfer effectiveness and number of transfer units, Calculation and designing of the heat exchanger. Double-pipe heat exchanger. Shell and tube heat exchanger. **[19 Lectures]**

UNIT 4

Evaporators- Solution properties, Concentration, Foaming, Degradation due to high temperature. Scaling, Equipment material. Evaporator. Natural circulation evaporator. Forced circulation evaporator, Falling film evaporator, Performance of steam heated tubular evaporators, Capacity and economy, Single and multiple effect evaporators. Boiling point elevation, Temperature profile in an evaporators. Method of feeding: Multiple effect evaporators, Enthalpy balance, Single effect evaporator, Effect of heat of dilution, Multiple effect evaporators. **[07 Lectures]**

Books:

1. McCabe, W. L., Smith, J.C., Harriott, P. "Unit Operations of Chemical Engineering", McGraw - Hill
2. Holman, J. P., "Heat Transfer", McGraw-Hill.
3. Coulson, J. M. & Richardson, J. F., "Chemical Engineering: Vol-1", Butterworth – Heinemann
4. McAdams, W. H., "Heat Transmission", McGraw-Hill.
5. Kern, D. Q., "Process Heat Transfer", McGraw-Hill.
6. Badger, W. L. & Bancharo, J. T., "Introduction to Chemical Engineering", Tata McGraw Hill.
7. Rudramoorthy, R. & Mayilsamy, K. "Heat and Mass Transfer". Pearson.

HEAT TRANSFER LAB

Experiments can be planned as per the following list:

1. To study heat transfer through lagged pipe.
2. To find out the thermal conductivity of liquid.
3. To study heat transfer in composite wall and find equivalent thermal conductivity.
4. To find out the convective heat transfer co-efficient of vertical cylinder in natural convection.
5. To determine convective heat transfer coefficient in forced convection.
6. To find out the overall heat transfer co-efficient of a double pipe heat exchanger.
7. To find out the overall heat transfer co-efficient of 1-2 shell & tube heat exchanger.
8. To study the heat transfer coefficient during drop wise and film wise condensation.
9. To study the heat transfer coefficient in a vertical and a horizontal condenser.
10. To find out the emissivity of a surface.
11. To find out the Stefan-boltzman constant and compare with the theoretical value.
12. Study and operation of a batch evaporator.

Details of the proposed changes in some clause of Ph.D. Ordinance of MMMUT Gorakhpur

Clause	Present Form	Proposed Form
6.5.1.2	Admission to Ph.D. will be made as per the rules prescribed by the University from time to time	Admission to Ph.D. will be made through a written test/interview. However, a candidate qualified UGC/CSIR-NET-JRF examination for award of fellowship may be directly admitted to Ph.D. program through interview. A candidate working in sponsored R&D project running in the University may be admitted to Ph.D. program after recommendation of Principal Investigator and concerned Head of Department.
6.5.3.2	**New clause added after 6.5.3.1**	**Self-financed full-time research scholars** Self-finance full time research scholar will support themselves. University will not provide scholarship to such candidates. They may receive fellowship from other agencies such as UGC/CSIR etc. However, University may provide contingency to such research scholars.
6.5.3.6	**Part Time** A candidate working in a research centre recognized by the University, Regular / contractual faculty members of this University / Employees working in Govt. / Govt.aided / Private Engineering colleges / Universities / Industries / Public sector organizations shall be considered for the admission under this category subject to the terms and conditions prescribed by the University.	**Part Time** A candidate working on regular basis in a research centre recognized by the University/ Regular faculty members of this University / Employees working in Govt. / Govt. aided / Private Engineering colleges / Universities / Industries / Public sector organizations having minimum two year experience shall be considered for the admission under this category subject to the terms and conditions prescribed by the University. However, a regular faculty member of this University desirous of pursuing Ph.D.

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		program will have to discharge duty of his/her services. He/She will not be entitled to get any assistantship/fellowship from the University. Part time research scholar's parent workplace must be located in the radial distance of 100Km from the University.
6.5.3.7	**Conversion from Full Time to Part Time**	A student admitted to a full-time Ph.D. programme category may be permitted to change to a part time Ph.D. programme category. A student requesting for such a conversion must have completed the coursework successfully, passed the comprehensive examination, given the Research Proposal Presentation which is adjudged as satisfactory. Such candidates shall have to get their request recommended by the supervisor(s) and Head of concerned Department and also produce a No Objection Certificate from the Head of the Institution/Organization, which he/she proposes to join. Such conversion, if approved by the DRC, will be subject to the following conditions. (i) The student must complete his/her thesis within deadline governed by Clause **6.5.4** counted from the date of his/her first registration in the programme. (ii) Provision of conversion from full-time to part-time status can be availed once by the student during his/her programme, and (iii) His/her continuation on part-time status will be subject to his/her making satisfactory progress towards completing the Ph.D. thesis. However, such part time candidate will not be entitled for

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		any kind of scholarship/assistantship.
6.5.3.8	**Conversion from Full Time to Full Time External**	**Full time external** Full-time research scholars can leave the University for taking up any teaching or R&D assignment. Such candidate will be treated as full time external candidate provided that the organization to which candidate joins, have research laboratories, R&D facilities and will normally carryout part or all of one's research work there only under the supervision of a co-guide employed in the same organization and a guide/supervisor of this University approved by the Vice-Chancellor. However, such candidates will have to complete course work and comprehensive examination successfully in the time stipulated for full time research scholars of the University. Such candidates shall have to get their request recommended by the supervisor(s) and Head of concerned Department and also produce a No Objection Certificate from the Head of the Institution/Organization, which he/she proposes to join. Such candidates will not be entitled for any kind of scholarship /assistantship.
6.5.3.9		Full-time research scholars can leave the University for taking up any assignments only after submission of the thesis;failing which their studentship shall be cancelled automatically provided it does not fall under provisions of **Clause 6.5.14** regarding temporary discontinuance.
6.5.4.5	Normally all research scholars admitted to the Ph.D. programme will be required to stay in the	A full-time research scholar residential requirement shall be from the registration till the

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<table>
<tr><td></td><td>University till they complete all assigned work and submit thesis. However, the minimum residential requirement for research scholars under full-time/part-time is three/two years, respectively or till successful completion of course work and comprehensive examination which ever is later.</td><td>final submission of the thesis. However, the minimum residential requirement for research scholar under full time category is two years or till successful completion of the course work and comprehensive examination whichever is earlier. There is no minimum residential requirement for part time research scholars. However, they are supposed to complete the course required upto third semester. Departments will facilitate courses for such candidates</td></tr>
<tr><td>6.5.4.6</td><td>Full-time research scholars can leave the University for taking up any assignments only after submission of the thesis; failing which their studentship shall be cancelled automatically provided it does not fall under provisions of Clause 6.5.14 regarding temporary discontinuance.</td><td>This is shifted in clause 6.5.3 as new clause 6.5.3.9</td></tr>
<tr><td>6.5.5.1</td><td>
<table>
<tr><td>1</td><td>Dean, Research and Development or other Dean/Professor to be nominated by the Vice Chancellorinhis absence</td><td>Convener</td></tr>
<tr><td>2</td><td>One Subject Expert from the relevant area to be nominated by Vice Chancellor who could be even from outside the University</td><td>Member</td></tr>
<tr><td>3</td><td>Dean (for PG Programme)</td><td>Member</td></tr>
<tr><td>4</td><td>Head of concerned Department/Centre</td><td>Member</td></tr>
<tr><td>5</td><td>Supervisor(s) of the concerned Student</td><td>Member</td></tr>
</table>
In case of the persons in ex-officio capacity in</td><td>
<table>
<tr><td>1</td><td>Dean, Post Graduate Studies & Research and Development or any other Dean/Professor to be nominated by the Vice Chancellor</td><td>Convener</td></tr>
<tr><td>2</td><td>One Subject Expert from the relevant area to be nominated by Vice Chancellor who could be even from outside the University</td><td>Member</td></tr>
<tr><td>3</td><td>Head of concerned Department /Centre</td><td>Member</td></tr>
<tr><td>4</td><td>Supervisor(s) of the concerned Student</td><td>Member</td></tr>
<tr><td>5</td><td>Two Faculty members from the concerned department having Ph.D. degree, recommended by concerned Head and approved by Dean PGS, R &D</td><td>Member</td></tr>
</table>
In case of the persons in ex-officio capacity in</td></tr>
</table>

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	DRC at sl. nos. 1, 3, 4 happen to be the supervisor of the candidate, then Convener shall get the alternate senior faculty member to be nominated at his/her place by the Vice Chancellor.	DRC at sl. nos. 1 &3 happen to be the supervisor of the candidate, then Convener shall get the alternate senior faculty member to be nominated at his/her place by the Vice Chancellor.
6.5.5.2	The full-time/part-time research scholars should successfully complete four courses (min. 12 credits) recommended by the Supervisor(s) with the approval of Vice-Chancellor through the concerned Head of Department/Dean preferably in first semester but not later than second semester from the date of his/her first registration. Such courses should have not been studied by the research scholar in their UG/PG programme.	The full-time research scholars should complete four courses of at least 12 credits recommended by the Head of Department/Dean/Supervisor preferably in first semester but not later than second semester from the date of his/her first registration. The part-time research scholars should successfully complete 4 courses (or minimum 12 credits) recommended by the Supervisor(s) through the concerned Head of Department/Dean preferably upto second semester but not later than third semester from the date of his/her first registration. Such courses should have not been studied by the research scholar in their UG/PG programme.
6.5.5.5	A research scholar is considered to have completed a subject successfully and earned the credits if he secures a Letter Grade equal to or higher than 'B'. Once a subject completed successfully, it cannot be repeated. Letter Grade obtained lower than 'B' will be ignored in calculation of credits completed.	A research scholar is considered to have completed a subject successfully and earned the credits if he/she secures a CGPA of 7. The performance of Ph.D. course work of a student will be evaluated in terms of two indices, viz. the Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester, and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point of time considered cumulatively. It is computed as follows: If the grades awarded to a student are G1,G2,G3

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<table>
<tr><td></td><td></td><td>etc in courses with corresponding credits C1, C2,C3 etc, the CGPA is given by

CGPA = (C1G1 + C2 G2 +C3G3 ...) / (C1 + C2 + C3...)

<table><tr><th>Grade</th><th>Grade Points</th><th>Marks (in %)</th></tr><tr><td>A+</td><td>10</td><td>90-100</td></tr><tr><td>A</td><td>9</td><td>80-89</td></tr><tr><td>B+</td><td>8</td><td>70-79</td></tr><tr><td>B</td><td>7</td><td>60-69</td></tr><tr><td>C</td><td>6</td><td>50-59</td></tr><tr><td>D</td><td>5</td><td>40-49</td></tr><tr><td>F</td><td>4</td><td><40</td></tr></table></td></tr>
<tr><td>6.5.5.8</td><td>The part time research scholars shall have to complete the course work as full time research scholar.</td><td>The part time research scholars shall have to complete the course work as per clause 6.5.5.2.</td></tr>
<tr><td>6.5.6.4</td><td>The research scholars are normally expected to successfully complete the Comprehensive Examination preferably in second semester but not later than third semesters from the date of first registration of research scholar.</td><td>The full-time research scholars are normally expected to successfully complete the Comprehensive Examination preferably in second semester but not later than third semesters from the date of first registration of research scholar.
The part time research scholars are normally expected to successfully complete the Comprehensive Examination preferably in third semester but not later than fourth semesters from the date of first registration of research scholar.</td></tr>
<tr><td>6.5.7.1</td><td>A research scholar will be allowed to make his pre-submission thesis presentation, after successful completion of prescribed courses, comprehensive examination and after publishing/getting acceptance of at least two research papers out of his/her research work in SCI journals or such other reputed and peer-reviewed non-paid journals approved by the</td><td>A research scholar will be allowed to make his pre-submission thesis presentation, after successful completion of prescribed courses, comprehensive examination and after publishing/getting acceptance of at least two research papers out of his/her research work in SCI/ SCI mago journals/ One research paper in SCI/SCI mago journal and one patent or such</td></tr>
</table>

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	Vice- Chancellor. This presentation should precisely reflect all aspects of the research work to be included in his/her thesis. The research scholar shall make the pre-submission thesis presentation for internal assessment of quality of research work and grant of permission before his/her constituted DRC. The DRC will, if it approves the work reported in the presentation, permits the research scholar to submit the thesis and recommend a panel of at least five External Examiners from outside the India (Foreign Universities from advanced/ developed countries) and five External Examiners from within India (faculty of IITs/NITs/ reputed Engineering Colleges or Universities/ Professionals from leading Industries/Scientists from central and regional laboratories) of relevant sub-discipline; otherwise, research scholar shall have to go for further work/modifications as suggested by the concerned DRC and repeat the process. The evaluation outcome is given below. A person working in the same organization(s)/institute(s)/ University where the research scholar is employed cannot, however, be appointed as External Examiner for that research scholar.	other reputed and peer-reviewed journals approved by the Vice- Chancellor. This presentation should precisely reflect all aspects of the research work to be included in his/her thesis. The research scholar shall make the pre-submission thesis presentation for internal assessment of quality of research work and grant of permission before his/her constituted DRC. The DRC will, if it approves the work reported in the presentation, permit the research scholar to submit the thesis and recommend a panel of at least five External Examiners from outside the India and five External Examiners from within India (faculty of IITs/NITs/ reputed Engineering Colleges or Universities/ Professionals from leading Industries/Scientists from central and regional laboratories) of relevant sub-discipline having high research credentials not below the rank of associate professors except from IITs/NITs subject to fulfilling the requirement of clause 6.5.9; otherwise, research scholar shall have to go for further work/modifications as suggested by the concerned DRC and repeat the process. The evaluation outcome is given below. A person working in the same organization(s)/institute(s)/ University where the research scholar is employed cannot, however, be appointed as External Examiner for that research scholar.

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6.5.7.2	The research scholar shall, within three month of grant of approval for submission/ acceptance of the pre-submission thesis presentation, can submit four copies of the thesis (soft and loose spiral bound hard version) and extended abstract of the thesis. The DRC may grant additional time for the thesis submission beyond three months but not more than six months on request from the research scholar for valid reasons.	The research scholar shall, within four month of grant of approval for submission/ acceptance of the pre-submission thesis presentation, can submit four copies of the thesis (soft and loose spiral bound hard version) and extended abstract of the thesis. Similarity check report (plagrism) is also to be submitted. The DRC may grant additional time for the thesis submission beyond four months but not more than six months on request from the research scholar for valid reasons.
6.5.8.1	The Vice-Chancellor may appoint one External Examiner each from India and outside India from the recommended panel or the panel can be returned back for modification or may add any name to or delete any name from the list recommended by the DRC. The supervisor/first supervisor in case of two supervisors will also serve as Examiner(s) in addition to the two External Examiners and shall be appointed by Vice-Chancellor.	The Vice-Chancellor may appoint two examiners from outside University, of which at least one must be from India from the recommended panel or the panel can be returned back for modification or may add any name to or delete any name from the list recommended by the DRC. The supervisor/first supervisor in case of two supervisors will also serve as Examiner(s) in addition to the two External Examiners and shall be appointed by Vice-Chancellor.
6.5.9 (a)	The faculty members of the University holding doctorate degree and having a minimum of two research papers in SCI journals or such other reputed and peer reviewed non-paid journals approved by the Vice-Chancellor and post Ph.D. experience of minimum two years are eligible to supervise research scholars.	The faculty members of the University holding doctorate degree and having a minimum of one year experience are eligible to supervise research scholars subject to approval of Vice-Chancellor. If a research scholar is working with two supervisors, the number will be counted as 0.5 for each supervisor.

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(b)	At any time, a supervisor will have maximum number of full/part time research scholars as given below inside and outside the University in totality. The department will regulate the number of research scholars with University fellowship (including QIP and other fellowships allotted to the University) that will be assigned to each eligible faculty.	At any time, a supervisor will have maximum number of full/part time research scholars as given below inside and outside the University in totality. However, Vice-Chancellor may increase/decrease the number of research scholars under the supervision of a particular cadre of faculty. The department will regulate the number of research scholars with University fellowship (including QIP and other fellowships allotted to the University) that will be assigned to each eligible faculty.
(h)	For the research scholars admitted under part-time category normally carrying out part or all of his/her research work in their respective industry/organization/ national laboratories, only Ph.D. degree holder scientist/engineer having minimum five-year experience in relevant area of research at the level of Associate Professor or higher may be appointed as co-supervisor.	For the research scholars admitted under part-time category normally carrying out part or all of his/her research work in their respective industry/organization/ national laboratories, only Ph.D. degree holder scientist/engineer/faculty having minimum five-year experience in relevant area of research at the level of Assistant Professor or higher may be appointed as co-supervisor subject to approval of Vice-Chancellor.
6.5.10 (g)	In case there has been change (due to	In case there has been change (due to unavoidable

S.N.	Faculty Member	Maximum Numbers of Research Scholar
1.	Professor	6
2.	Associate Professor	4
3.	Assistant professor	2

S.N.	Faculty Member	Maximum Numbers of Research Scholar
1.	Professor	6
2.	Associate Professor	4
3.	Assistant professor	3

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	unavoidable reasons)/addition in the Supervisor(s), the thesis will be submitted not earlier than two years from the date of such change/addition.	reasons)/addition in the Supervisor(s), the thesis will be submitted not earlier than 6 calendar months from the date of such change.
(j)	With prior approval of Vice-Chancellor, a full time research scholar may be allowed to have a co-supervisor from outside the University, in exceptional cases.	For any research scholars the Vice-chancellor on the recommendation of concerned Head of the Department/DRC may appoint an external supervisor. Appointment of such external supervisor would not be made after the lapse of 12 calendar months from the date of initial registration of the research scholars. However, if appointed he would be designated as co-supervisor of the candidate. In no case total number of supervisor(s) from inside University & outside would not be more than three.
6.5.12.3	**6.5.12.3** If the progress of a research scholar in a semester is evaluated as 'Satisfactory' by the supervisor, the student will be permitted for the registration in commencing semester. **6.5.12.4** If the progress is evaluated as 'unsatisfactory' the student will be permitted for registration in commencing semester with a warning issued to the Research scholar by the office of Dean prescribed by University. **6.5.12.5** If there is 'Unsatisfactory' evaluation in two consecutive semesters to a research scholar, his/her registration for Ph.D. programme will stand terminated.	**Ph. D. Credit Distribution** Full time Ph. D. students will register for minimum 12 credits in each semester while part time research scholar will register for minimum 9 credits. The DRC on the recommendation of Supervisor may allow registration for maximum of 18 credits in a Semester. Following shall be the distributions of the credits.

Semester	Credit through	Max Credit
I	Course work/research Seminar/Mini project/Thesis performance credit	18
II	Course work/research Seminar/Mini project/Comprehensive/State of art/Thesis performance credit	18

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III	Course work/research Seminar/Mini project/Comprehensive/State of art/Thesis performance credit	18
IV	State of art/Thesis performance credit	18
V	Thesis performance credit	18
VI	Thesis performance credit	18

The code of registered subject in Ph.D programme will be as follows:

1. For course work the subject code will be same as that of M.Tech programme of respective departments.
2. For other thesis related subjects the code will be named as under

Example:

DAS0201(**DAS**-Doctoral Applied Science, **02**-Second semester, **01**- code of Comprehensive)

DAS0302 (DAS-Doctoral Applied Science, **03**-Third semester, **02**- code of State of Art)

DAS0403 (DAS-Doctoral Applied Science, **04**-Fourth semester, **03**- code of Thesis Performance Credit)

Comprehensive examination will be of 9 credits. If a student secures 50% and above in the comprehensive examination as per clause **6.5.6.1.** he/she will complete comprehensive satisfactorily and the grade 'S' will be awarded. For marks less than 50% candidate will be awarded grade 'X' and he/she will have to repeat the comprehensive examination.

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Min. Total Credits to be earned	Min. Credits through Course work/ Research Seminar / Mini-Projects	Credits through Comprehensive Examination	Credits through State of Art Seminar	Min Credits through Research
72	12	9	9	42

1. Thesis performance credit shall be submitted in the combination of six S and/or X.
2. The performance credit in general shall be assigned by DRC
3. At the end of every Semester, all Departments shall forward the satisfactory/unsatisfactory report to the Dean PGS and R&D.

The grade S or X will be awarded for assigned credits as follows: At the end of the semester, DRC will assess the student's progress towards the assigned work during the semester and will award the grade S for each unit if the work is satisfactory and a X for every unsatisfactory assignment. Thus, a student registered for 18 credits can get one of the following five combinations 6S, 5S1X, 4S2X, 3S3X, 2S4X, 1S5X, 6X.

Format for Ph.D. assigned grades in student's transcripts

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		<table><tr><th>Semester</th><th>Assigned work</th><th>Assigned Credit</th><th>Grading Option</th></tr><tr><td>VI</td><td>6</td><td>18</td><td>6S,5S1X,4S2X,3 S3X,2S4X,1S5X, 6X</td></tr><tr><td>V</td><td>5</td><td>15</td><td>5S, 4S1X,3S2X, 2S3X, 1S4X, 5X</td></tr><tr><td>IV</td><td>4</td><td>12</td><td>4S, 3S1X, 2S2X, 1S3X, 4X</td></tr><tr><td>III</td><td>3</td><td>9</td><td>3S, 2S1X, 1S2X, 3X</td></tr><tr><td>II</td><td>2</td><td>6</td><td>2S, 1S1X, 2X</td></tr><tr><td>I</td><td>1</td><td>3</td><td>1S, 1X</td></tr></table> A letter of warning will be issued to a Ph.D. student by the Head of the Department when he/she accumulates three or more Xs. The Dean PGS and R&D will keep a watch on the progress of every student and whenever a student fails to meet the requirements, will intimate the head and concerned supervisor. If a student's programme is terminated, the Head of the Department will issue the letter of termination.
6.5.13.8	Any student who concurrently registers for any postgraduate/research degree at another University/College/Organization or undertakes employment in case of full time candidate and technically not available in this University shall be automatically de-registered from this University.	Any student who concurrently registers for any postgraduate/research degree at another University/College/Organization or undertakes employment in case of full time candidate and technically not available in this University shall be automatically de-registered from this University. However, this clause will have no effect on the candidature of a full time research scholars being converted to full time external research scholars as per clause **6.5.3.8.**
6.5.16.4	If his/ her academic and research progress is not as per requirement and the DRC recommends for cancellation.	If his/ her academic and research progress is not as per requirement and the DRC recommends for cancellation in following conditions. **i)** his/her CGPA is below 7 in Ph.D. course work. **ii)** he/she accumulates 11 or more Xs towards

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		thesis grades. **iii)** he/she accumulates 8 or more Xs towards thesis grades in two consecutive semesters.
6.5.19		**Leave Rules** Full-time research scholars may be granted leave on submission of application to the Head of the Department concerned through the Supervisor. A application letter must be submitted in advance of the date of commencement of the leave requested. **1.** A research scholar may be allowed maximum leave of 30 days in an academic calendar year. **2.** The students going for prescribed training, or any academic work related to the his/her thesis up to maximum of 30 days in an academic calendar, assigned by the Supervisor, approved by the HoD shall be treated as academic leave. Leave for academic work beyond this duration if needed will be recommended by concerned HoD and same may be approved by the Vice-Chancellor. Such academic leave will not be more than six calendar month for entire duration of Ph.D. programme. **3.** A research scholar may be allowed for medical leave upto a maximum of three month for entire duration of Ph.D. programme.

Dissolved
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सलाह — 6

Amendments in Some Clauses of Ordinance for U.G. Programmes

Existing Clause

...ause No. - 6.1.6.2 (Tests & Examinations)

...) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	15
2		Minor Test-II	1 Hour	15
3		Minor Test-III	1 Hour	15
4		Tutorial/ Assignment/ Quiz/Attendance	-	15
5	Major Examination		3 Hours	40

...) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce-I	-	15
2		Viva Voce-II	-	15
3		Viva Voce-III	-	15
4		Practical Work/ Attendance / Record/Viva Voce	-	15
5	Major Examination		3 Hours	40

...c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	10
2		Minor Test-II	1 Hour	10
3		Minor Test-III	1 Hour	10
4		Tutorial/ Attendance Home Assignment/ Quiz	-	10
5	Practical Work/ Record/Viva Voce/ Practical Examination			20
6	Major Examination		3 Hours	40

Note: *The syllabus for Minor Test-I, Minor Test-II and Minor Test-III will be 25% each in a successive manner. However, the Major examination will be conducted from the entire syllabus of the subject.*

Students, who are absent in Minor Test-I/Minor Test-II/Minor Test-III on genuine grounds such as admission to hospital or representing the University with prior permission and reporting to the Head of Department concerned within two days of rejoining, may be permitted for only one special test with the permission of the Head of Department concerned. The special test will be conducted after the Minor Test-III. The coverage for the special test shall be the combined syllabus of Minor Test-I/Minor Test-II/Minor Test-III of the subject.

Amended Clause

Clause No. - 6.1.6.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	30
2		Tutorial/ Assignment/ Quiz/Attendance	-	20
3	Major Examination		3 Hours	50

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce	-	20
2		Practical Work	-	20
		Attendance / Record		10
3	Major Examination		3 Hours	50

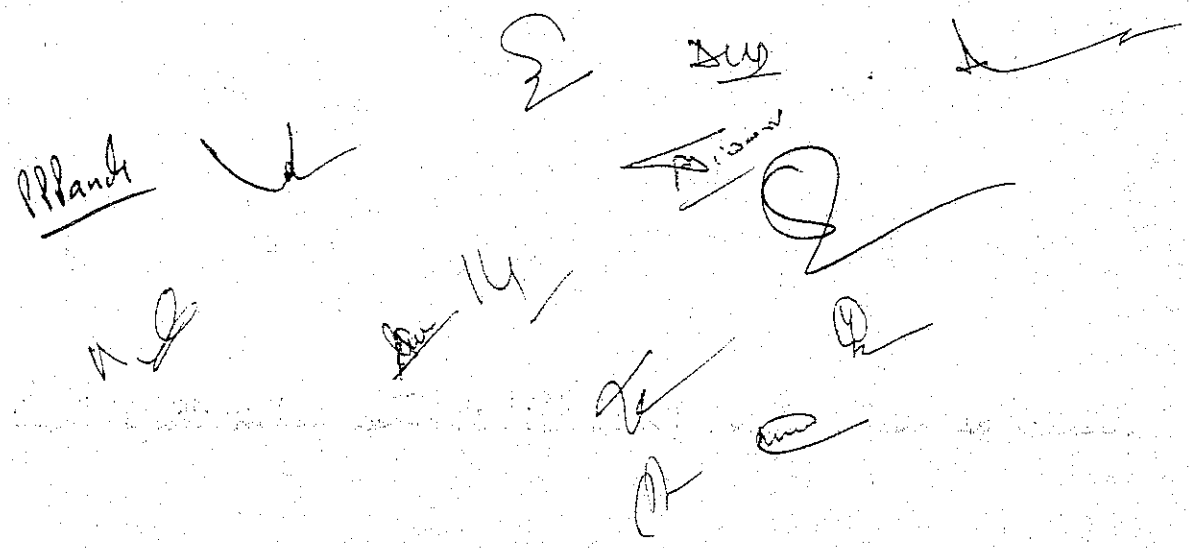
(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	20
2		Tutorial/ Attendance Home Assignment/ Quiz	-	10
3		Practical Work/ Record/Viva Voce		10
4		Practical Examination		10
5	Major Examination		3 Hours	50

Note: *The syllabus for Minor Test will be 50% of the total syllabus. However, the Major examination will be conducted from the entire syllabus of the subject in such a way that 20% weightage is given to Unit-I & II and 80% weightage to Unit-III & IV of the syllabus.*

There is no provision of special minor test. It is compulsory for a student to appear in major examination otherwise he/she will be declared fail in that subject. If a student could not pass in a subject he/she may be allowed for re-major examination. There is no minimum marks criterion in continuous evaluation for appearing in re-major examination.

Clause No. - 6.1.7 (RE-MAJOR EXAMINATION)	Clause No. - 6.1.7 (RE-MAJOR EXAMINATION)
Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, **provided she/he has scored at least 40% of the total marks allocated for continuous evaluation in the concerned subject.** However, special re-major subject examination for the both odd & even semester subjects may be arranged annually in the month of June for the student who have already appeared in VI or VIII semester major examinations provided they could not improve F grade in respective subject in regular semester examinations.	Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, However, special re-major subject examination for the both odd & even semester subjects may be arranged annually in the month of June for the students who have already appeared in VI or VIII semester major examinations provided they could not improve F grade in respective subject in regular semester examinations.
Clause No. 6.1.9.3	**Clause No. 6.1.9.3**
A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it and the marks obtained are 40% or more in continuous evaluation of the subject. In case of the marks in continuous evaluation of any subject of a semester being less than 40% then the student has to repeat the semester completely and continue as per Clause 6.1.9.2.	A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it. In case of the total marks of a subject is less than 40% in a semester then the student has to repeat the subject completely and continue as per Clause 6.1.9.2.



Amendments in Some Clauses of Ordinance for M.Tech Programmes

Existing Clause

Clause No. - 6.2.6.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	15
2		Minor Test-II	1 Hour	15
3		Minor Test-III	1 Hour	15
4		Tutorial/ Assignment/ Quiz/Attendance	-	15
5	Major Examination		3 Hours	40

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce-I	-	15
2		Viva Voce-II	-	15
3		Viva Voce-III	-	15
4		Practical Work/ Attendance / Record/Viva Voce	-	15
5	Major Examination		3 Hours	40

(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	10
2		Minor Test-II	1 Hour	10
3		Minor Test-III	1 Hour	10
4		Tutorial/ Attendance Home Assignment/ Quiz	-	10
5	Practical Work/ Record/Viva Voce/ Practical Examination			20
6	Major Examination		3 Hours	40

Note: *The syllabus for Minor Test-I, Minor Test-II and Minor Test-III will be 25% each in a successive manner. However, the Major examination will be conducted from the entire syllabus of the subject.*

Students, who are absent in Minor Test-I/Minor Test-II/Minor Test-III on genuine grounds such as admission to hospital or representing the University with prior permission and reporting to the Head of Department concerned within two days of rejoining, may be permitted for only one special test with the permission of the Head of Department concerned. The special test will be conducted after the Minor Test-III. The coverage for the special test shall be the combined syllabus of Minor Test-I/Minor Test-II/Minor Test-III of the subject.

Amended Clause

Clause No. - 6.2.6.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	30
2		Tutorial/ Assignment/ Quiz/Attendance	-	20
3	Major Examination		3 Hours	50

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce	-	20
2		Practical Work	-	20
		Attendance / Record		10
3	Major Examination		3 Hours	50

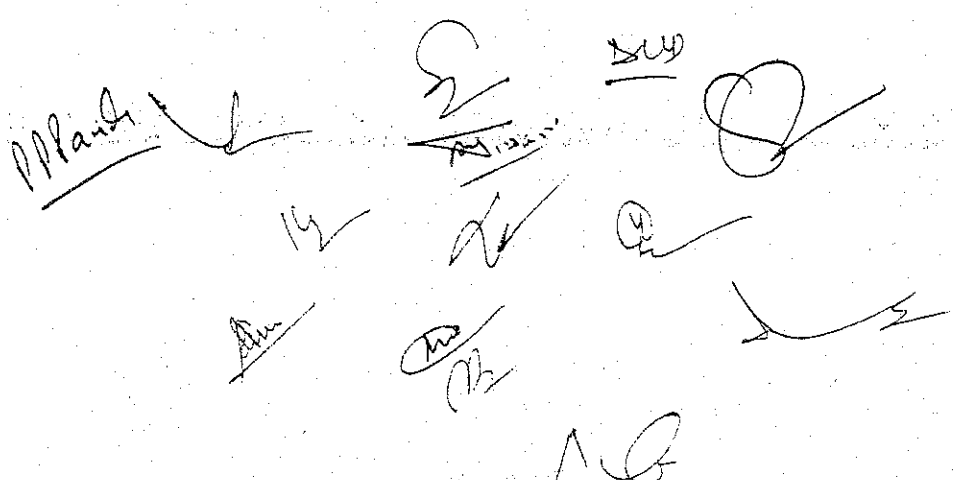
(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	20
2		Tutorial/ Attendance Home Assignment/ Quiz	-	10
3		Practical Work/ Record/Viva Voce		10
4		Practical Examination		10
5	Major Examination		3 Hours	50

Note: *The syllabus for Minor Test will be 50% of the total syllabus. However, the Major examination will be conducted from the entire syllabus of the subject in such a way that 20% weightage is given to Unit-I & II and 80% weightage to Unit-III & IV of the syllabus.*

There is no provision of special minor test. It is compulsory for a student to appear in major examination otherwise he/she will be declared fail in that subject. If a student could not pass in a subject he/she may be allowed for re-major examination. There is no minimum marks criterion in continuous evaluation for appearing in re-major examination.

Clause No. - 6.2.7 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, provided she/he has scored at least 40% of the total marks allocated for continuous evaluation in the concerned subject. However, special re-major subject examination for the both odd & even semester subjects may be arranged during fourth semester for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.	Clause No. - 6.2.7 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination. However, special re-major subject examination for the both odd & even semester subjects may be arranged during fourth semester for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.
Clause No. - 6.2.10.4 A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it and the marks obtained are 40% or more in continuous evaluation of the subject. In case of the marks in continuous evaluation of any subject of a semester being less than 40% then the student has to repeat the semester completely and continue as per Clause 6.2.10.2. and 6.2.10.3.	**Clause No. - 6.2.10.4** A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it. In case of the total marks of a subject is less than 40% in a semester then the student has to repeat the subject completely and continue as per Clause 6.2.10.2. and 6.2.10.3.
Clause No. - 6.2.13.5 If a student is unable to submit the dissertation by the end of fourth semester, he/she is to get registered in every semester till the submission of the dissertation. For every onward registration after two years, he/she has to pay the required fee as prescribed by the University.	**Clause No. - 6.2.13.5** If a student is unable to submit the dissertation by the end of fourth semester, he/she is required to get registered in every semester till the submission of the dissertation. For every onward registration after two years, he/she has to pay the required fee for a semester for which his/her registration is being considered.



Amendments in Some Clauses of Ordinance for M.B.A. Programme

Existing Clause

e No. - 6.3.5.2 (Tests & Examinations)

stribution of Marks for Theory based Subject

Assessment Basis		Duration	Marks
Continuous Evaluation	Minor Test-I	1 Hour	15
	Minor Test-II	1 Hour	15
	Minor Test-III	1 Hour	15
	Tutorial/ Assignment/ Quiz/Attendance	-	15
Major Examination		3 Hours	40

stribution of Marks for Practical based Subject

Assessment Basis		Duration	Marks
Continuous Evaluation	Viva Voce-I	-	15
	Viva Voce-II	-	15
	Viva Voce-III	-	15
	Practical Work/ Attendance / Record/Viva Voce	-	15
Major Examination		3 Hours	40

stribution of Marks for Theory & Practical based bject

Assessment Basis		Duration	Marks
Continuous Evaluation	Minor Test-I	1 Hour	10
	Minor Test-II	1 Hour	10
	Minor Test-III	1 Hour	10
	Tutorial/ Attendance Home Assignment/ Quiz	-	10
Practical Work/ Record/Viva Voce/ Practical Examination			20
Major Examination		3 Hours	40

The syllabus for Minor Test-I, Minor Test-II and Minor will be 25% each in a successive manner. However, the xamination will be conducted from the entire syllabus of ject.

, who are absent in Minor Test-I/Minor Test-II/Minor Test-III on grounds such as admission to hospital or representing the ty with prior permission and reporting to the Head of ent/ Coordinator concerned within two days of rejoining, may be d for only one special test with the permission of the Head of ent concerned. The special test will be conducted after the Minor The coverage for the special test shall be the combined syllabus Test-I/Minor Test-II/Minor Test-III of the subject.

Amended Clause

Clause No. - 6.3.5.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	30
2		Tutorial/ Assignment/ Quiz/Attendance	-	20
3	Major Examination		3 Hours	50

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce	-	20
2		Practical Work	-	20
		Attendance / Record		10
3	Major Examination		3 Hours	50

(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	20
2		Tutorial/ Attendance Home Assignment/ Quiz	-	10
3		Practical Work/ Record/Viva Voce		10
4		Practical Examination		10
5	Major Examination		3 Hours	50

Note: *The syllabus for Minor Test will be 50% of the total syllabus. However, the Major examination will be conducted from the entire syllabus of the subject in such a way that 20% weightage is given to Unit-I & II and 80% weightage to Unit-III & IV of the syllabus.*

There is no provision of special minor test. It is compulsory for a student to appear in major examination otherwise he/she will be declared fail in that subject. If a student could not pass in a subject he/she may be allowed for re-major examination. There is no minimum marks criterion in continuous evaluation for appearing in re-major examination.

Clause No. - 6.3.6 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, provided she/he has scored at least 40% of the total marks allocated for continuous evaluation in the concerned subject. However, special re-major subject examination for the both odd & even semester subjects may be arranged during fourth semester for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.	Clause No. - 6.3.6 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination. However, special re-major subject examination for the both odd & even semester subjects may be arranged during fourth semester for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.
Clause No. - 6.3.8.4 A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it and the marks obtained are 40% or more in continuous evaluation of the subject. In case of the marks in continuous evaluation of any subject of a semester being less than 40% then the student has to repeat the semester completely and continue as per Clause 6.3.8.2. and 6.3.8.3.	Clause No. - 6.3.8.4 A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it. In case of the total marks of a subject is less than 40% in a semester then the student has to repeat the subject completely and continue as per Clause 6.3.8.2. and 6.3.8.3. Clause No. - 6.3.11.6 (Proposed new clause being added) If a student is unable to submit the dissertation by the end of fourth semester, he/she is required to get registered in every semester till the submission of the dissertation. For every onward registration after two years, he/she has to pay the required fee for which his/her registration is being considered.

Amendments in Some Clauses of Ordinance for M.C.A. programme

Existing Clause

Clause No. - 6.4.5.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	15
2		Minor Test-II	1 Hour	15
3		Minor Test-III	1 Hour	15
4		Tutorial/ Assignment/ Quiz/Attendance	-	15
5	Major Examination		3 Hours	40

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce-I	-	15
2		Viva Voce-II	-	15
3		Viva Voce-III	-	15
4		Practical Work/ Attendance / Record/Viva Voce	-	15
5	Major Examination		3 Hours	40

(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test-I	1 Hour	10
2		Minor Test-II	1 Hour	10
3		Minor Test-III	1 Hour	10
4		Tutorial/ Attendance Home Assignment/ Quiz	-	10
5	Practical Work/ Record/Viva Voce/ Practical Examination			20
6	Major Examination		3 Hours	40

Note: *The syllabus for Minor Test-I, Minor Test-II and Minor Test-III will be 25% each in a successive manner. However, the Major examination will be conducted from the entire syllabus of the subject.*

Students, who are absent in Minor Test-I/Minor Test-II/Minor Test-III on genuine grounds such as admission to hospital or representing the University with prior permission and reporting to the Head of Department concerned within two days of rejoining, may be permitted for only one special test with the permission of the Head of Department concerned. The special test will be conducted after the Minor Test-III. The coverage for the special test shall be the combined syllabus of Minor Test-I/Minor Test-II/Minor Test-III of the subject.

Amended Clause

Clause No. - 6.4.5.2 (Tests & Examinations)

(a) Distribution of Marks for Theory based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	30
2		Tutorial/ Assignment/ Quiz/Attendance	-	20
3	Major Examination		3 Hours	50

(b) Distribution of Marks for Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Viva Voce	-	20
2		Practical Work	-	20
		Attendance / Record		10
3	Major Examination		3 Hours	50

(c) Distribution of Marks for Theory & Practical based Subject

S.N.	Assessment Basis		Duration	Marks
1	Continuous Evaluation	Minor Test	2 Hours	20
2		Tutorial/ Attendance Home Assignment/ Quiz	-	10
3		Practical Work/ Record/Viva Voce		10
4		Practical Examination		10
5	Major Examination		3 Hours	50

Note: *The syllabus for Minor Test will be 50% of the total syllabus. However, the Major examination will be conducted from the entire syllabus of the subject in such a way that 20% weightage is given to Unit-I & II and 80% weightage to Unit-III & IV of the syllabus.*

There is no provision of special minor test. It is compulsory for a student to appear in major examination otherwise he/she will be declared fail in that subject. If a student could not pass in a subject he/she may be allowed for re-major examination. There is no minimum marks criterion in continuous evaluation for appearing in re-major examination.

Clause No. - 6.4.6 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, provided she/he has scored at least 40% of the total marks allocated for continuous evaluation in the concerned subject. However, special re-major subject examination for the both odd & even semester subjects may be arranged annually in the month of June for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.	Clause No. - 6.4.6 (RE-MAJOR EXAMINATION) Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination. However, special re-major subject examination for the both odd & even semester subjects may be arranged annually in the month of June for the students who have already appeared in regular semester major examinations as per availability but they could not improve F grade in respective subjects or who could not get chance to appear in re-major examination.
Clause No. - 6.4.8.3 A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it and the marks obtained are 40% or more in continuous evaluation of the subject. In case of the marks in continuous evaluation of any subject of a semester being less than 40% then the student has to repeat the semester completely and continue as per Clause 6.4.8.2.	Clause No. - 6.4.8.3 A student is considered to pass in a particular subject if he/she secures A(+) to D grade in it. In case of the total marks of a subject is less than 40% in a semester then the student has to repeat the subject completely and continue as per Clause 6.4.8.2.
	Clause No. - 6.4.11.6 (Proposed new clause being added) If a student is unable to submit the dissertation by the end of sixth semester, he/she is required to get registered in every semester till the submission of the dissertation. For every onward registration after two years, he/she has to pay the required fee for which his/her registration is being considered.

Annexure - 7

मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय
गोरखपुर, 273010 (उ0प्र0) भारत
Madan Mohan Malaviya University of Technology
Gorakhpur - 273010 (U.P.) India

(Established by Act No. 22 of 2013 of U.P. Govt.)

Specimen Copy

Date of Issue :

Sr. No.

MIGRATION CERTIFICATE

Student's Name	:	
Mother's Name	:	
Father's Name	:	
Roll No.	:	
Enrollment	:	
Course	:	
Branch	:	
Specialization	:	
Academic Session	:	

The University has 'No Objection' to his/her migration/admission to pursue further studies.

Checked By :

Controller of Examination

Registrar

उपाधि क्रमांक/
Degree Serial No.
MUT/2016/MBA/001

नामांकन संख्या /
Enrollment No.

अनुक्रमांक संख्या /
Roll No.
2014063101

STUDENT IMAGE

मदन मोहन मालवीय प्रौद्योगिकी विश्वविद्यालय
Madan Mohan Malaviya University of Technology

गोरखपुर (उ.प्र.), भारत
Gorakhpur (U.P.), India

विश्वविद्यालय की विद्या परिषद की अनुशंसा पर
आस्था पाठक सुपुत्री श्रीमती *शशिबाला पाठक* एवं श्री *मुरली मनोहर पाठक*
को मास्टर आफ बिजनेस एडमिनिस्ट्रेशन की उपाधि
प्रथम श्रेणी में सम्मान-सहित
उनके द्वारा इस उपाधि की अवाप्ति हेतु
विश्वविद्यालय द्वारा विहित अपेक्षाओं को सफलतापूर्वक पूर्ण करने पर
एतद्द्वारा वर्ष 2017 में प्रदान की जाती है।

Upon the recommendation of the University's Academic Council,
the University hereby confers the degree of
Master of Business Administration
upon
AASTHA PATHAK S/D/of Mrs. **SHASHIBALA PATHAK** & Mr. **MURLI MANOHAR PATHAK**
who has successfully completed the requirements prescribed by the University for the award
of this degree in
First Division with Honors
in the year 2017.

दिनांक / Dated : .....

UV Barcode

(प्रो0 श्री निवास सिंह)
कुलपति
(Prof. Sri Niwas Singh)
Vice - Chancellor

SAMPLE