REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

برنامج

فنى الصيدلة

دبلوم نظام ثلاث سنوات

اشراف معالي الاستاذ/ غازي أحمد علي محسن - وزير التعليم الفني والتدريب المهني
اعداد الجهاز التنفيذي للمجلس الاعلى لكليات المجتمع

اعضاء اللجنة العلمية د. مجدي الذيفاني
ا.د. أحمد السباتي
ا.د. عبدالولي الشرجبي

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SYLLABUS
YEAR (1)
SEMESTER (1)

I. المعلومات العامة عن المقرر:	
1. اسم المقرر:	لغة عربية

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.2	رمز المقرر ورقمه:					
.3	الساعات المعتمدة:	محاضرة	سمنار	عملي	تدريب	الإجمالي
		2				2
.4	المستوى والفصل الدراسي:					
.5	المتطلبات السابقة لدراسة المقرر(إن وجدت):					
.6	المتطلبات المصاحبة لدراسة المقرر(إن وجدت):					
.7	البرنامج/التي يتم فيها تدريس المقرر:					
.8	لغة تدريس المقرر:					
.9	نظام الدراسة:					
.10	أسلوب الدراسة في البرنامج:					
.11	مكان تدريس المقرر:					
.12	اسم معد مواصفات المقرر:					
.13	تاريخ اعتماد مجلس الكلية:					

II. وصف المقرر:

دراسة اللغة العربية من خلال نصوص أدبيه وتطبيقات نحوية ، يأخذ أنماط من النصوص الأدبية والشعرية والنثرية من مختلف العصور الأدبية، ثم استخرج الشواهد النحوية لغرض التطبيق.

III. مخرجات التعلم

ملخص للمعارف والمهارات التي سيقدمها المقرر:

١. الإلمام بأشهر أبواب النحو التي يستقيم بها اللسان ويعتبر من سلامة القول منطوقاً ومكتوباً.1
٢. اكتساب الذوق الأدبي من خلال الإطلاع على أشهر النصوص الأدبية.

تسكين مخرجات التعلم

أولا: تسكين مخرجات تعلم المقرر (المعارف والفهم) باستراتيجية التدريس والتقويم:

مخرجات المقرر / المعرفة والفهم	استراتيجية التدريس	استراتيجية التقويم
A1 . يعرف اسس وقواعد كتابة التقرير والرسالة الإدارية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A2. يميز طرق كتابة السيرة الذاتية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A3 . يحدد القواعد النحوية للجمل الاسمية والفعلية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A4 . يعرف القواعد الإملائية اللازمة لضبط الكتابة	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A5 . يميز نصوص الشعر العربي ويحللها ويتذوقها	المحاضرة المناقشة	اسئلة مقالية اسئلة قصيرة

	العصف الذهنى	اسئلة هادفة

ثانيا: تسكين مخرجات تعلم المقرر (المهارات الذهنية) باستراتيجية التدريس و التقويم:		
مخرجات المقرر/ المهارات الذهنية	استراتيجية التدريس	استراتيجية التقويم
B1 . يفرق بين الجمل الاسمية والفعلية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
B2 . يحلل النصوص الأدبية ويتذوقها	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

ثالثا: تسكين مخرجات تعلم المقرر (المهارات المهنية والعملية) باستراتيجية التدريس والتقويم:		
مخرجات المقرر/ المهارات المهنية والعملية	استراتيجية التدريس	استراتيجية التقويم
C1.يلم بأهم قواعد النحو لتحسين مهارة القراءة الجهرية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
C2. ستخدم القواعد النحوية والإملائية فى كتابة التقارير والرسائل الإدارية والسيرة الذاتية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

رابعا: تسكين مخرجات تعلم المقرر (المهارات العامة) باستراتيجة التدريس والتقويم:		
مخرجات المقرر	استراتيجية التدريس	استراتيجية التقويم
لا ينطبق		

IV. تحديد وكتابة مواضيع المقرر الرئيسة والفرعية (النظرية والعملية) وربطها بمخرجات التعلم المقصودة للمساق مع تحديد الساعات المعتمدة لها.

كتابة وحدات /مواضيع محتوى المقرر

أولا: الجانب النظري

الرقم	مخرجات تعلم المقرر	وحدات/ موضوعات المقرر	المواضيع التفصيلية	عدد الأسابيع	الساعات الفعلية
1	B1, C1	مهارة القراءة الجهرية	▪ قراءة نصوص نثرية وشعرية ▪ تدريبات صفية	2	4
2	B1, C1	مهارة القراءة الصامتة	▪ قراءة نصوص نثرية وشعرية ▪ تدريبات صفية	2	4

3	A1, C2	مهارة الكتابة الوظيفية	▪ كتابة الرسالة الإدارية ▪ تدريبات صفية	1	2
4	A1, C2	الكتابة الوظيفية	▪ كتابة التقرير ▪ تدريبات صفية	1	2
5	A1, B1, C1, C2	اختبار نصف الفصل	اختبار نصف الفصل	1	2
6	A2, B1, C1, C2	السيرة الذاتية	▪ السيرة الذاتية ▪ تدريبات صفية	1	2
7	A3, B1, C1	مهارة ضبط الكتابة	▪ القواعد النحوية (الجملة الاسمية ونواسخها) ▪ تدريبات صفية	2	4
8	A3, B1, C1	مهارة ضبط الكتابة	▪ القواعد النحوية (الجملة الفعلية ومكملاتها) ▪ تدريبات صفية	1	2
9	A4, C2	مهارة ضبط الكتابة	▪ بعض القواعد الإملائية (همزتا الوصل والقطع – الهمزة المتوسطة – علامات الترقيم) ▪ تدريبات صفية	2	4
10	A5, B2	التذوق الادبي	▪ دراسة نصوص من الشعر العربي وتحليلها وتذوقها ▪ تدريبات صفية + تكاليف	1	2
11	A2, A3, A4, A5, B1, B2, C1	الامتحان النهائي		1	2
إجمالي الأسابيع والساعات				16	32

ثانيا: الجانب العملي:

تكتب تجارب (مواضيع) العملي

الرقم	التجارب المعملية	عدد الأسابيع	الساعات الفعلية	مخرجات التعلم
	لا ينطبق			
إجمالي الأسابيع والساعات				

V. استراتيجية التدريس:

المحاضرة
المناقشة
العصف الذهنى
مناقشة مجموعات صغيرة
تكاليف

VI. التعيينات والتكليفات:

الرقم	التكليف/النشاط	مخرجات التعلم	الأسبوع	الدرجة
1	كتابة التقرير	A2, C2	6-8	2.5
2	السيرة الذاتية	A2, B1, C1, C2	7-10	2.5

VII. جدولة طرق/ أدوات التقويم خلال الفصل الدراسي

الرقم	طرق/أدوات التقويم	الأسبوع	الدرجة	نسبة الدرجة إلى درجة التقويم النهائي	المخرجات التي يحققها
1	الحضور	15-1	5	%5	A1, A2, A3, A4, A5, B1, C1
2	الواجبات	12-4	5	%5	A1, A2, B1, C1, C2
3	اختبار منتصف الفصل	7	20	%20	A1, B1, C1, C2
4	الاختبار النهائي	17-15	70	%70	A2, A3, A4, A5, B1, B2, C1
			100	%100	

VIII. مصادر التعلم:

(المؤلف، العام، العنوان، مكان النشر والناشر)

المراجع الرئيسة: (لا تزيد عن مرجعين)

1تاريخ الأدب العربي / د. أحمد حسن الزيات.
المصادر الأدبية واللغوية في التراث العربي / د. عز الدين إسماعيل.

المراجع المساندة

١ .الأدب العربي الحديث / د. محمد صالح الشطبي.

الكتب والمراجع الاثرائية (الدوريات العلمية،...الخ) (يرفق قائمة بذلك):

www.google.com

المصادر الإلكترونية ومواقع الإنترنت...الخ

مواد تعلم أخرى مثل البرامج التي تعتمد على الكمبيوتر أو الأقراص المضغوطة ... الخ

IX. الضوابط والسياسات المتبعة في المقرر.

بعد الرجوع للوائح الجامعة يتم كتابة السياسة العامة للمساق فيما يتعلق بالآتي:

1. **سياسة حضور الفعاليات التعليمية:** تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2. **الحضور المتأخر :** يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3. **ضوابط الامتحان:** تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان.

4.	**التعيينات والمشاريع:** تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	**الغش:** تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
6.	**الانتحال:** يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	**سياسات أخرى:** أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكليفات ..... الخ

X.	المعلومات العامة عن المقرر:	
14.	**اسم المقرر:**	ثقافة اسلامية

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.15	رمز المقرر ورقمه:					
.16	الساعات المعتمدة:	محاضرة	سمنار	عملي	تدريب	الإجمالي
		2				2
.17	المستوى والفصل الدراسي:					
.18	المتطلبات السابقة لدراسة المقرر(إن وجدت):					
.19	المتطلبات المصاحبة لدراسة المقرر(إن وجدت):					
.20	البرنامج/التي يتم فيها تدريس المقرر:					
.21	لغة تدريس المقرر:					
.22	نظام الدراسة:					
.23	أسلوب الدراسة في البرنامج:					
.24	مكان تدريس المقرر:					
.25	اسم معد مواصفات المقرر:					
.26	تاريخ اعتماد مجلس الكلية:					

X. وصف المقرر:

صمم هذا المقرر لتزويد الطالب بالمعارف، والمهارات، والاتجاهات السلوكية، اللازمة في مجال الثقافة والأخلاقيات الإسلامية المهنية، والتي تمكنه من التحلي بأخلاقيات الإسلام، والصفات التي تميزه عن غيره - في هذا المجال- ، والابتعاد عن المفسدات، ومحاولة تعزيز الثوابت، وإزالة السلبيات..

XI. مخرجات التعلم

ملخص للمعارف والمهارات التي سيقدمها المقرر:

١ -تعريف الطلبة برأي الإسلام في بعض القضايا المعاصرة، وكيفية التعامل معها.
٢ -تميز مبادئ الإسلام في تأسيس الأسرة واستمرارها
٣ -إكساب الطلبة بعض المفاهيم العامة للأخلاقيات الإسلامية، وأثرها في حياة الأفراد.
٤ -تثقيف أفراد المجتمع حول العادات السيئة والضارة التي ظهرت وانتشرت فيه.
٥ -الإلمام بالقوانين الطبية واللوائح المنظمة للمهنة.
٦ -إدراك أهمية تجنب الأخطاء في المهنة وعقوبتها في الشرع والقانون.

تسكين مخرجات التعلم

أولا: تسكين مخرجات تعلم المقرر (المعارف والفهم) باستراتيجية التدريس والتقويم:

مخرجات المقرر / المعرفة والفهم	استراتيجية التدريس	استراتيجية التقويم
A1 . يناقش مصادر الثقافة الاسلامية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A2. يشرح اركان العقيدة الاسلامية	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A3 . يحدد مفهوم الأسرة وأهميتها، ومظاهر اهتمام الإسلام بالأسرة.	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

A4 . يوضح واجبات الحاكم وحقوقه في النظام السياسي.	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A5 . يناقش الأخلاق ومكانتها في الإسلام.	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A6. يحدد مصادر وأهمية أخلاقيات المهنة		
A7 يدرك الأحكام الشرعية والأخلاقية في بعض القضايا مثل الموت الرحيم . وعمليات التجميل	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A8. يدرك رأي الإسلام حول بعض المشكلات المعاصرة، وكيفية التعامل معها.	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
A9 .يناقش مفهوم الشورى فى الإسلام	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

ثانيا: تسكين مخرجات تعلم المقرر (المهارات الذهنية) باستراتيجية التدريس و التقويم:		
مخرجات المقرر/ المهارات الذهنية	استراتيجية التدريس	استراتيجية التقويم
B1 . يفرق بين الثقافة والحضارة	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
B2 . يناقش أثر العقيدة على الفرد والمجتمع	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
B3 يناقش مبادئ الاسلام التى يجب ان تراعى عند الزواج	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة
B4 ناقش نضرة الاسلام للصحة	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

ثالثا: تسكين مخرجات تعلم المقرر (المهارات المهنية والعملية) باستراتيجية التدريس والتقويم:		
مخرجات المقرر/ المهارات المهنية والعملية	استراتيجية التدريس	استراتيجية التقويم
لا ينطبق		

رابعا: تسكين مخرجات تعلم المقرر (المهارات العامة) باستراتيجة التدريس والتقويم:		
مخرجات المقرر	استراتيجية التدريس	استراتيجية التقويم
D1.يعتمد المفاهيم العامة للأخلاقيات الإسلامية، والاحكام الشرعية اثناء التعامل مع القضايا والمشكلات المعاصرة.	المحاضرة المناقشة العصف الذهنى	اسئلة مقالية اسئلة قصيرة اسئلة هادفة

XI. تحديد وكتابة مواضيع المقرر الرئيسة والفرعية (النظرية والعملية) وربطها بمخرجات التعلم المقصودة للمساق مع تحديد الساعات المعتمدة لها.

كتابة وحدات /مواضيع محتوى المقرر

أولا: الجانب النظري

الرقم	مخرجات تعلم المقرر	وحدات/ موضوعات المقرر	المواضيع التفصيلية	عدد الأسابيع	الساعات الفعلية
1	A1, B1	مقدمة: الثقافة والحضارة	▪ تعريف الثقافة – الثقافة الإسلامية . ▪تعريف الحضارة ومكوناتها، ومظاهرها . ▪ الفرق بين الثقافة والحضارة. ▪ مصادر الثقافة الإسلامية. ▪ خصائص الثقافة الاسلامية.	2	4
2	A2, B2	النظام العقائدي في الإسلام	▪ تعريف العقيدة. ▪ أركان العقيدة الإسلامية. ▪ أثر العقيدة على الفرد والمجتمع.	1	2
3	A3, B3	النظام الاجتماعي في الإسلام	▪ تعريف النظام الاجتماعي. ▪ تعريف الأسرة وأهميتها، ومظاهر اهتمام الإسلام بالأسرة. ▪ مبادئ الإسلام في تأسيس الأسرة واستمرارها: مبادئ تراعى قبل الإقدام على الزواج. مبادئ تراعى بعد الزواج. مبادئ تراعى عند حصول ▪ زعزعة أو خلاف أسري.	1	2
4	A4	النظام السياسي في الإسلام	▪ مفهوم النظام السياسي. ▪ أسس النظام السياسي في لإسلام ا- السيادة للشرع- السلطة للأمة. - للأمة حاكم واحد. الشورى. واجبات الحاكم وحقوقه في	1	2

			▪ النظام السياسي.		
5	A5	النظام الأخلاقي في الإسلام	▪تعريف الأخلاق ومكانتها في الإسلام. ▪ الأخلاق كما وردت في القرآن الكريم. ▪ الأخلاق كما وردت في السنة النبوية.	1	2
6	A6	أخلاقيات المهنة.	▪ مفهوم أخلاقيات المهنة. ▪ مصادر وأهمية أخلاقيات المهنة. ▪ تصنيف القيم الأخلاقية المهنية.	1	2
7	A1, A2, A3, A4, A5, 7	امتحان نصفي	امتحان نصفي	1	2
8	B4	هدي الإسلام في الصحة والحفاظ عليها	▪ الإسلام والصحة. ▪ الطب الوقائي في الإسلام.	1	2
9	A7, D1	أحكام شرعية وأخلاقية في بعض القضايا	▪ الاجهاض – عمليات التجميل – نقل الدم ▪ زراعة الأعضاء - الاستنساخ - ▪ وسائل منع الحمل.	2	4
10	A7, D1	تابع أحكام شرعية	▪ تشريح الجثث – الموت الرحيم - الدواء والصوم. ▪الأدوية والإدمان – التداوي ▪ بالأعشاب.	1	2
11	A7, A8, D1	بعض المشكلات المعاصرة وكيف عالجها الإسلام	▪ سوء التغذية. - انتشار الأمراض المعدية. ▪ حكم وأثر ممارسة بعض العادات الضارة: ▫ المخدرات - المهدئات - اللواط. - العادة السرية.	1	2
12	A9, D1	قضايا معاصرة	▪ الغزو الفكري - الشورى في الإسلام - حقوق الإنسان في الإسلام.	1	2
13	A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, B2, B3, B4, D1	الامتحان النهائي	امتحان نهائي	1	2
		إجمالي الأسابيع والساعات		16	32

ثانيا: الجانب العملي:

تكتب تجارب (مواضيع) العملي

الرقم	التجارب المعملية	عدد الأسابيع	الساعات الفعلية	مخرجات التعلم

	لا ينطبق			
إجمالي الأسابيع والساعات				

XIV. استراتيجية التدريس:

١ .المحاضرة
٢ .المناقشة
٣ .العصف الذهنى
٤ .مناقشة مجموعات صغيرة
٥ .تكاليف

XV. التعيينات والتكليفات:

الرقم	التكليف/النشاط	مخرجات التعلم	الأسبوع	الدرجة
1	زراعة الاعضاء	A7,D1	6-8	2.5
2	االاستنساخ	A7,D1	7-10	2.5

XVI. جدولة طرق/ أدوات التقويم خلال الفصل الدراسي

الرقم	طرق/أدوات التقويم	الأسبوع	الدرجة	نسبة الدرجة إلى درجة التقويم النهائي	المخرجات التي يحققها
1	الحضور	15-1	5	%5	A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, B2, B3
2	الواجبات	12-4	5	%5	A7, D1
3	اختبار منتصف الفصل	7	20	%20	A1, A2, A3, A4, A5, A6, B1, B2, B3
4	الاختبار النهائي	17-15	70	%70	A2, A3, A4, A5, B1, B2, C1
			100	%100	A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, B2, B3, B4, D1

XVII. مصادر التعلم:

(المؤلف، العام، العنوان، مكان النشر والناشر)

المراجع الرئيسة: (لا تزيد عن مرجعين)

١ -الثقافة الإسلامية للدكتور/ عبد الحكيم بن عبد اللطيف السروري.
٢ -أضواء على الثقافة الإسلامية د/ على محمد الأهدل و د/ عبد الحكيم السروري.

المراجع المساندة

١ -الثقافة الإسلامية د/ عبد الغني حيدر.
٢ -الموسوعة الفقهية الطبية د/ محمد أحمد كنعان.
٣ -قانون الجرائم والعقوبات اليمني د/ علي حسن الشرفي

الكتب والمراجع الاثرائية (الدوريات العلمية،...الخ) (يرفق قائمة بذلك):

www.google.com

المصادر الإلكترونية ومواقع الإنترنت...الخ

مواد تعلم أخرى مثل البرامج التي تعتمد على الكمبيوتر أو الأقراص المضغوطة ... الخ	

XV. الضوابط والسياسات المتبعة في المقرر.	
بعد الرجوع للوائح الجامعة يتم كتابة السياسة العامة للمساق فيما يتعلق بالآتي:	
.8	**سياسة حضور الفعاليات التعليمية:** تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
.9	**الحضور المتأخر :** يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
.10	**ضوابط الامتحان:** تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان.
.11	**التعيينات والمشاريع:** تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
.12	**الغش:** تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
.13	**الانتحال:** يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.

Standard II: Course Identification and General Information:

1	**Course Title:**	English Language I				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		2	**NA**	**NA**	**NA**	**2**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

This course is designed especially for students of health sciences. It actually covers the four skills of a language: Reading, writing, listening, \ and speaking. The emphasis is, however, rather placed on reading and writing and terminology than on speaking and listening. The course deals primarily with the essential Grammar that are important for students in their health field studies such as (the passive, nouns, pronouns, adjectives and so on articles.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Grammatically correct English
2. Reading, writing, speaking and listening to English language.
3. Develop ability to read, understand and express meaningfully, the prescribed text.
4. Ability to communicate with other person.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Identify the structure of sentences and paragraphs	Lecture Discussion Demonstration Classroom conversation	Objective type Short answers Fill in the blanks Para Phrasing
A2. Describe the correct English grammar composition.	Lecture Discussion Demonstration Classroom conversation	Objective type Short answers Fill in the blanks Para Phrasing
A3. Recognize precise writing and summarizing	Lecture Discussion Demonstration Classroom conversation	Objective type Short answers Fill in the blanks Para Phrasing
A4. Describe the composition of letter	Lecture Discussion Demonstration Classroom conversation	Objective type Short answers Fill in the blanks Para Phrasing
A5. Discuss structures of telephone conversion	Lecture Discussion Demonstration Classroom conversation	Objective type Short answers Fill in the blanks Para Phrasing

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Develop ability to read, understand and express meaningfully, the prescribed English text.	Lecture Discussion Exercise on: Reading & Summarizing	Short Answers Essay type.
B2. Differentiate between formal and informal letters	Exercise on: Writing & Summarizing	Short Answers Essay type.

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
C1. Perform reading, writing, and speaking English correctly	Lecture Discussion Class-room Conversation Assignments Exercise on: Reading & writing	Short Answers Objective questions Practice
C2. Practice listening to audio, and video materials	Lecture Discussion Class-room Conversation Exercise on listening	Short Answers Objective questions Practice

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
D1. Use correct words and structure to communicate with other person.	Exercise on Debating Participating in Seminar	Assessment of the skills based on the checklist

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Applied Grammar	Correct usage: ▪ The structure of sentences ▪ The structure of paragraphs ▪ Enlargements of Vocabulary ▪ Phonetics	4	8	

2	Reading and comprehension	▪ Review of selected materials and express oneself in one's words. ▪ Enlargement of Vocabulary.	6	12	
3	Written Composition	▪ Precise writing and summarizing ▪ Writing of bibliography ▪ Enlargement of Vocabulary	4	8	
4	Midterm Exam	Midterm Exam	2	4	
5	Various forms of composition	▪ The study of various forms of composition ✓ Paragraph, ✓ Essay, ✓ Letter, ✓ Summary, ✓ Practice in writing	4	8	
6	Spoken English	▪ Medical report ▪ Oral report ▪ Discussion & Summarization ▪ Debate ▪ Telephonic conversion	4	8	
7	Listening Comprehension	▪ Media, audio, video, speeches etc.	4	8	
8	**Final Term Exam**		2	4	
Number of Weeks /and Units Per Semester			**30**	**60**	

V. Teaching strategies of the course
1. Lecture Discussion 2. Demonstrate use of dictionary grammar 3. Class-room Conversation 4. Exercise on use of Grammar 5. Exercise on: Reading, writing, speaking and listening

VI. Assignments

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Letter writing		**4-10**	**5**
2	Medical reports.		**8-12**	**5**

VII. Schedule of Assessment Tasks for Students During the Semester					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	
2	Student assignments	5th and 12th week	**5**	**5%**	
3	Mid-term exam	7th or 8th week	**20**	**20%**	
4	Final-exam	16th -17th week	**70**	**70%**	
	Number of Weeks /and Units Per Semester		**100**	**100%**	

VII: Learning Resources:

1. Required Textbook(s) (maximum two).

1. Oxford English for careers (2009). Nursing.
2. Quirk, Randolph and Jreenbaum Sidney(1987). A University Grammar of English, Hong Kong: Longman group (FE) Ltd.

1. Essential References.

1. Thomson A. J. and Maitüiet A. V. (1987). A 1icticl English Grammar, Delhi: Oxford University Press.
2. Gimson A. E. (1986). An Introduction to pronunciation of English. Hong kong: Wing King Tong Ca. Ltd.
3. O' Connor J. D, (1986). Better English h'onuwiation. Cambridge:University Press.

2. Electronic Materials and Web Sites *etc*.

1. WWW.encontinouelear.com
2. Http: // www.google. Com

IX. Course Policies:	
1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
	Tardy: any student who is late for more than 15 minutes from starting the lecture will

2	not be allowed to attend the lecture and will be considered absent.
3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

Standard II: Course Identification and General Information:

1	**Course Title:**	Introduction to Computer				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		1	**2**	**NA**	**NA**	**3**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

This course is designed for students to develop basic understanding of uses of computer and its applications in health care.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Discuss various concepts used in computer and the disk operating system.
2. Recognize features of computer aided teaching and testing.
3. Uses operating system, MS Office, multi-media, internet and Email.
4. Describe the use of hospital management system.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Recognize various concepts used in computer	Lecture Discussion Demonstration	Short answers Objective type Essay
A2. Identify application of computer in medicine	Lecture Discussion Demonstration	Short answers Objective type Essay
A3. Describe the disk operating system	Lecture Discussion Demonstration	Short answers Objective type Essay
A4. Discuss uses of internet and Email	Lecture Discussion Demonstration	Short answers Objective type Essay
A5. Describe and use the statistical packages	Lecture Discussion Demonstration	Short answers Objective type Essay
A6. Describe the use of Hospital Management System	Lecture Discussion Demonstration	Short answers Objective type Essay

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Discuss aided teaching and testing in computers	Lecture Discussion Demonstration Brain storming.	Short answers Objective type Essay
B2, Compare between two statistical packages features	Lecture Discussion Demonstration Brain storming.	Short answers Objective type Essay

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
C1. Demonstrate skill in the use of MS Office	Lecture - Discussion Demonstration Group discussion	Short answers Objective type Practical Exam
C2. Demonstrate skill in using multi-media	Lecture - Discussion Demonstration Group discussion	Short answers Objective type Practical Exam
C3. Demonstrate use of internet and Email	Lecture - Discussion Demonstration Group discussion	Short answers Objective type Practical Exam
C4. Demonstrate use of hospital management system	Lecture - Discussion Demonstration Group discussion	Short answers Objective type Practical Exam

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
D1. Describe the use of hospital management system.	Lecture Discussion Demonstration Practice Session	Short answer questions Objective type Practical Exam

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Introduction	▪ Introduction to computers ▪ Hardware and software; ▪ trends and technology ▪ Application of computers in medicine and health care	2	4	A1, A2
2	Introduction to disk- operating system DOS	▪ Introduction ▪ Windows (all version ▪ Introduction to Microsoft word (MS-Word) ▪ MS-Excel with pictorial presentation ▪ MS-Access	4	8	A3, C1

		▪ MS-Power point			
3	Multimedia	Types & uses Computer aided teaching & testing	2	4	B1, C2
4	Midterm exam	Midterm exam	1	2	A1, A2, A3, B1, C1, C2
5	Internet & E-mail	Use of Internet and: e-mail	2	4	A4, C3
6	Statistical packages	Statistical packages: types and their features	2	4	A5, B2
7	Oxygenation	Physiology of (ventilation, circulation & oxygenation) Factors Affecting Oxygenation Alterations in oxygenation Oxygen therapy Maintenance of patent airway Oxygen administration Suction Inhalations: dry and moist Chest physiotherapy Care of Chest drainage Pulse ornery	1	2	A4, B5
8	Hospital Management System	Types Uses	1	2	A6, C4, D1
9	Final exam	Final exam	1	2	A1, A2, A3, A4, A5, A6, B1, B2, C1, C2, C3, C4, D1
Number of Weeks /and Units Per Semester			**16**	**32**	

B – Practical Aspect:

Order	Task/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Use of MS Office	6	12	C1

2	Use multi-media	2	4	C2
3	Use of internet and Email	2	4	C3
4	Use of hospital management system	2	4	C4
	Number of Weeks /and Units Per Semester	**12**	**24**	

V. Teaching strategies of the course
1. Lecture - Discussion 2. Demonstration 3. Brainstorming 4. Case discussions / Seminar

VI. Assignments

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Application of computers in health careWrite records of patient Simulated - Actual	A1, A2, B1, B2, C1, C2	**2-10**	**5**

VII. Schedule of Assessment Tasks for Students During the Semester

No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	A1, A2, A3, A4, A5, A6, B1, B2, C1, C2, C3
2	Student assignments	5th and 12th week	**5**	**5%**	A1, A2, B1, B2, C1, C2
3	Mid-term exam	7th or 8th week	**20**	**20%**	A1, A2, A3, B1, C1, C2
4	Final-exam	16th -17th week	**70**	**70%**	A1, A2, A3, A4, A5, A6, B1, B2, C1, C2, C3, C4, D1

VII: Learning Resources:

1. Required Textbook(s) (maximum two).

1. N.K. Anand & Shikha Goel (2009). Computers for Nurses, A.I.T.B.S. Publishers ,India.

2. Essential References.

2. Thacker N (2009). Computers for Nurses, India.

3. **Electronic Materials and Web Sites *etc*.**

1. www.google.com
2. www.yahoo.com

IX. Course Policies:

1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.
3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Medical Terminology**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

Medical Terminology is designed to prepare the students to pronounce, define, analyze and comprehend the medical language. It introduces them to the vocabulary, abbreviations, and symbols used in health care settings. Emphasis is placed on building medical terms using prefixes, suffixes, and word roots.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)			**Referenced PILOs (مخرجات تعلم البرنامج)**
A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Identify the basic structure of medical words, including prefixes, suffixes, roots, combining forms, and plurals.		
a2	Identify the rules of building medical terms and a connection between the term and its relationship to body systems.		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Construct medical terms correctly using the rules of combining suffixes, prefixes, and word roots.		
b2	Analyze medical terms into their defining parts and meanings as relevant to body systems and functions.		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Use medical terms properly to report health problems, diagnosis, procedures and treatment.		
c2	Write terms for selected structures of the body systems, matching them with their descriptions.		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Display high degree of personal commitment, self-developing and cooperation with his colleagues.		
d2	Demonstrate analytical, communicative and professional skills related to his area of interest.		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Identify the basic structure of medical words, including prefixes, suffixes, roots, combining forms, and plurals.	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Identify the rules of building medical terms and a connection between the term and its relationship to body systems.	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
Demonstrate analytical, communicative and professional skills related to his area of interest.			
		Teaching Strategies	**Assessment Strategies**
b1	Construct medical terms correctly using the rules of combining suffixes, prefixes, and word roots.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Analyze medical terms into their defining parts and meanings as relevant to body systems and functions.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
c1	Use medical terms properly to report health problems, diagnosis, procedures and treatment.	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Write terms for selected structures of the body systems,	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam

	matching them with their descriptions.		▪ Final exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Display high degree of personal commitment, self-developing and cooperation with his colleagues.	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Demonstrate analytical, communicative and professional skills related to his area of interest.	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	– Course objectives and design – What is medical terminology? – Features of a medical term – Parts of a medical term	1	2	a1, a2, b2, c1,
2	**Formation of Medical Term**	– Formation of a medical term – Pronunciation and pluralizing rules – Defining a medical term	1	2	a1, a2, b2, c1,
3	**Suffixes**	– Rules for linking suffixes – Types of suffixes - Surgical - Diagnostic - Pathological - Grammatical - Learning activities	1	2	a1, a2, b2, c1, d1
4	**Prefixes**	– Features of prefixes – Rules for linking prefixes – Types of prefixes - Prefixes of position	1	2	a1, a2, b2, c1, d1

		- Prefixes of number - Prefixes of measurement - Prefixes of direction - Prefixes of color - Prefixes of time - Prefixes of size and comparison - Prefixes of negation - Other common prefixes - Learning activities			
5	**Body Structure**	– Levels of Organization and related terms – Anatomical Position – Planes of the Body – Body Cavities – Abdominopelvic Divisions – Quadrants – Regions	1	2	a2, b1, c2, d2
6	**Body Structure**	– Directional Terms – Pathology Diagnostic, Symptomatic, and Related Terms, – Diagnostic and Therapeutic Procedures – Abbreviations – Learning Activities - Medical Record Activities	1	2	a2, b1, c2, d2
7	**Digestive System**	– Anatomy and Physiology Key terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities – Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
8	**Mid-Term Theoretical Exam**	– Mid-Term Theoretical written Exam	1	2	a1, a2, b1, b2, c1, c2, d1, d2
9	**Musculoskeletal System**	– Anatomy and Physiology Key terms	1	2	a2, b1, b2, c1, c2, d1, d2

		– Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities – Case study Reports			
10	**Cardiovascular System**	– Anatomy and Physiology Key terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities – Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
11	**Nervous System**	– Anatomy and Physiology Key terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities – Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
12	**Integumentary System**	– Anatomy and Physiology Key terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
13	**Reproductive System**	– Anatomy and Physiology Key terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
14	**Respiratory System**	– Anatomy and Physiology Key Terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms	1	2	a2, b1, b2, c1, c2, d1, d2

		– Learning Activities Case study Reports			
15	**Urinary System**	– Anatomy and Physiology Key Terms – Pathological and Diagnostic Terms – Surgical and Therapeutic Terms – Learning Activities Case study Reports	1	2	a2, b1, b2, c1, c2, d1, d2
16	**Final Theoretical Exam**	Final Theoretical Exam Written	1	2	a1, a2, b1, b2, c1, c2, d1, d2
Number of Weeks /and Units Per Semester					

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1:** Students are asked to finish "Identify and Define" work sheet handed to them. The work sheet is designed to check students' mastery of constructing and analyzing medical terms.	W5	**5**	a1, c1
2	**Assignment 2:** Read the case study reports and complete the charts given below. This is intended	W11	5	a2, b2, c2

	to check students comprehending faculties to communicate about a given health problem and procedures.			
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

- Fremgen, Bonnie F. and Frucht, Suzanne S., 2017, *Medical Terminology: A Living Language*: 78th edition, New York, Pearson.
- Gylys, Barbara A. and Wedding, Mary Ellen. 2009, *Medical Terminology Systems: A Body Systems Approach*,6th edition, Philadelphia, F. A. Davis Company.

2- Essential References:

- C. Leonard, Peggy, 2014. *Quick & Easy Medical Terminology*, 7th edition, Elsevier.
- Chabner, Davi-Ellen, 1991, *Medical Terminology: A Short Course*, 6th edition, Missouri, Saunders Elsevier Inc.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary
  1. http://www.openmd.com
  2. http://www.medicinenet.com Medtems Medical Dictionary AZ list
  3. http://www.medic8.com/MedicalDictionary.htm. Enter a medical term; then click on "Search" to see its definition.
- Web site providing information on health care issues, medical treatments, medications, etc.
  4. http://www.medbroadcast.com

- An interactive human anatomy site

1- www.innerbody.com. When you click on a system, be sure to scroll down to see other links and animations.

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.

I. Course Identification and General Information:

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

1	**Course Title:**	**Anatomy & Physiology1**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Field**	
		3	2	--	2
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

The course of human anatomy and physiology is designed to prepare the students with an understanding of the structural basis of the human body both at gross and microscopic levels. The course also provides an overview of the cells, the fluids and electrolytes, and acid–base balance. It includes also the laboratory period deals with the integumentary system, the musculoskeletal system, the head, neck, the spine and thorax).

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
B. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Recognize the structure and function of the normal cell, fluids and electrolytes and acid–base balance and pH	**A1**	

a2	Describe the anatomical significance with the physiological functions and with the clinical conditions of the integumentary system, the musculoskeletal system, the head, neck, the spine and thorax).	**A3**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate between epithelial tissue, connective tissue, muscle tissue, and nervous tissue	**B2**	
b2	Explain the surface markings of clinically important structures	**B3**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Demonstration of morphology of human body on anatomical models	**C1**	
c2	List the anatomic structures of the special senses, the functions of the anatomic structures of each sense and how the structures of the senses interrelate to perform their specialized functions	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Communicate with the patient and his family effectively in professional manner using the principles of communication techniques	D1	
d2	Use the ethical and professional standards in emergency care services	D3	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Recognize the structure and function of the normal cell, fluids and electrolytes and acid–base balance and pH	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Describe the anatomical significance with the physiological functions and with the clinical conditions of the integumentary system, the musculoskeletal system, the head, neck, the spine and thorax).	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Differentiate between epithelial tissue, connective tissue, muscle tissue, and nervous tissue	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Explain the surface markings of clinically important structures	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Demonstration of morphology of human body on anatomical models	▪ Case-Based Learning ▪ Clinical teaching & learning ▪ Laboratory work ▪ Role plays & simulation ▪ Small group discussion ▪ Seminar (Discussions) ▪ Practice session ▪ Problems solving	▪ Assignments ▪ Practical/Clinical examination ▪ Reports (Lab Reports.) ▪ Lab work ▪ Assessment of skills with checklist
c2	List the anatomic structures of the special senses, the functions of the anatomic structures of each sense and how the structures of the senses interrelate to perform their specialized functions	▪ Case-Based Learning ▪ Clinical teaching & learning ▪ Laboratory work ▪ Role plays & simulation ▪ Small group discussion ▪ Seminar (Discussions) ▪ Practice session ▪ Problems solving	▪ Assignments ▪ Practical/Clinical examination ▪ Reports (Lab Reports.) ▪ Lab work ▪ Assessment of skills with checklist
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
d1	Communicate with the patient and his family effectively in professional manner using the	▪ Classroom discussions,	▪ Presentations ▪ Case Studies ▪ Learning activities

	principles of communication techniques	▪ Problems solving ▪ Case study analysis	
d2	Use the ethical and professional standards in emergency care services	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**The cell and the cellular environment**	▪ **Introduction** ▪ **The cell and the cellular environment** ○ The normal cell ✓ Cell structure • The cell membrane • The cytoplasm • The organelles ○ Cell function ○ Tissues ○ Organs, organ systems, and the organism ○ System integration	2	4	a1, b1
2	**The cellular environment: fluids and electrolytes**	▪ **The cellular environment: fluids and electrolytes** ○ Water ✓ Hydration ○ Electrolytes ○ Osmosis and diffusion ✓ Water movement between intracellular and extracellular compartments ○ Water movement between intravascular and interstitial compartments	2	4	a1
3	**Acid–base balance**	▪ **Acid–base balance** ○ The ph scale ○ Bodily regulation of acid–base balance	1	2	a1
4	**Body systems**	▪ **The integumentary system** ○ **The skin** ✓ Epidermis ✓ Dermis ✓ Subcutaneous tissue	2	4	a1, b1, c1, d1

		○ The hair ○ The nails ▪ **The blood** ○ Components of blood ✓ Plasma ✓ Red blood cells ✓ White blood cells ✓ Platelets ○ Hemostasis			
5	**Midterm exam**	**Midterm exam**	1	2	a1, b1, c1, d1
6	**The musculoskeletal system**	▪ **The musculoskeletal system** ○ **Skeletal tissue and structure** ✓ Bone structure • The diaphysis • The epiphysis • The metaphysis • The medullary canal • The periosteum • Cartilage ✓ Joint structure • Types of joints • Ligaments • Joint capsule ○ **Skeletal organization** ✓ The extremities • Wrists and hands • Elbows • Shoulders • Ankles and feet • Knees • Hips and pelvis ○ **Bone aging** ○ **Muscular tissue & structure** ✓ Definition ✓ Type of muscles movement. ✓ Muscles of abdominal wall ✓ Muscles of respiration ✓ Pelvic diaphragm	3	6	a2, b1, b2, c2, d2
7	**The head, face, and neck**	▪ **The head, face, and neck** ○ **The head** ✓ The scalp ✓ The cranium ✓ The meninges ✓ Cerebrospinal fluid ✓ The brain ✓ CNS circulation ✓ Blood–brain barrier ✓ Cerebral perfusion pressure ✓ Cranial nerves	2	4	a2, b2, c2, d2

		✓ Ascending reticular activating system ○ **The face** ✓ The ear ✓ The eye ✓ The mouth ○ **The neck** ✓ Vasculature of the neck ✓ Airway structures ✓ Other structures of the neck			
8	**The spine and thorax**	▪ **The spine and thorax** ○ The spine ✓ The vertebral column ✓ Divisions of the vertebral column ○ The spinal meninges ○ The thorax ✓ The thoracic cage ✓ The diaphragm ✓ Associated musculature ✓ Trachea, bronchi, and lungs ✓ Mediastinum and heart ✓ Great vessels ✓ Esophagus	2	4	a2, c2, d2
9	**Final exam**	**Final exam**	**1**	**2**	a2, b1, b2, c2, d2
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Body Cells** • Cell & Tissues	2	4	**c1**
2	**Integumentary system** • Demonstration of the skin • Demonstration of the Epidermis • Demonstration of the Subcutaneous tissue	2	4	**c1**
3	**The musculoskeletal system** • Human skeleton, Muscular system and Joints	2	4	**c1**
4	**Midterm exam**	1	2	**c1**
5	**The head, and neck** • Demonstration of skull, maxilla, and mandible	2	4	**c1**
6	**The spine and thorax** • Demonstration of vertebral column • Demonstration of rib cage • Demonstration of the heart • Demonstration of the lungs	2	4	**c2**

7	**Sensory organs** • Demonstration of the eyes, ears, nose & tongue	2	4	**c2**
8	**Final exam**	1	2	**c2**
Number of Weeks /and Units Per Semester				

V. Teaching Strategies of the Course:

1. Interactive lecture
2. Seminars and student presentations
3. Brain storming
4. Role-play and simulation
5. Small group discussion
6. Learning tasks and activities
7. Problems solving
8. Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1**: Regulation of body fluid	W5	**5**	a1, b1
2	**Assignment 2:** Type of joints	W11	5	a2, b2,
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2

Total	**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1. Heylings D., Leinster S., Carmichael S., Saada J., Logan B., and Hutchings R., (2018). McMinn's Concise Human Anatomy. 2nd Ed.; Taylor & Francis Group, LLC
2. Jones S., (2017). Pocket Anatomy & Physiology. 3rd Ed. F. A. Davis Company, Philadelphia
3. Bledsoe B., Porter, R., & Cherry, R., (2014). Pearson New International Edition, Essentials of Paramedic Care Update, 2nd Ed., Pearson Education Limited

2- Essential References:

1. Sanders, M., & McKenaa k., Tan, D., Pollak A., and Mejia A., (2019). Sanders' Paramedic Textbook 5th Ed., USA.
2. LaPres J., Kersten ., and Tang Y., (2016). Gunstream's Anatomy & Physiology With Integrated Study Guide. 6th Ed. McGraw-Hill

3- Electronic Materials and Web Sites etc.:

Websites:

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:					
1	**Course Title:**	Physical pharmacy			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	1hr	1hr
4	**Study Level/ Semester at which this Course is offered:**	Level 1 st/1st			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				

7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy
8	**Language of Teaching the Course:**	English
9	**Study System:**	Semester
10	**Mode of Delivery:**	Full time
11	**Location of Teaching the Course:** **مكان تدريس المقرر**	Faculty : كلية.....
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني
[13	**Date of Approval:**	2021-2022

II. Course Description:

This course is designed to help the student to acquire knowledge and skills of physical pharmacy to enable the student to apply the related physical laws and principles in his field.

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**		**Referenced PILOs** **(مخرجات تعلم البرنامج)**	
C. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Explain the significance of distribution phenomena in pharmaceutical systems and in the bioavailability of drugs	**A1**	Explain the principles of design and formulation of different dosage forms
a2	Estimate the risk and importance of drug stability studies	**A2**	Explanation of medicines and their sources with regard to their identity ,safety ,optimal medical use ,contraindications to their use, as well as their mechanism of action
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Associate the extraction process variables with the theory of distribution to achieve an efficient extraction	**B1**	A student can classify groups of drugs and their mechanism of action that can used to treat certain diseases
b2	Analyze pharmaceutical degradation data and relate it to drug stability	**B2**	Calculation of drug doses and dosage regimen
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Develop an extraction procedure	**C1**	Acquisition of the necessary skills to detect fraud in any natural medicines provided
c2	Study and analyze drug complexes	**C2**	Preparation of some pharmaceutical drug forms
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Be able to do homework's and assignments	**D1**	Apply the principles of humanitarian needs
d2	Work effectively in a team	**D2**	Preparing great plans for the use of medicines

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Explain the significance of distribution phenomena in	Lectures	Mid term exam

	pharmaceutical systems and in the bioavailability of drugs		
a2	Estimate the risk and importance of drug stability studies	Laboratory	Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Associate the extraction process variables with the theory of distribution to achieve an efficient extraction	Large or small group discussion	Participation& semester work
b2	Analyze pharmaceutical degradation data and relate it to drug stability	Small Group Projects	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Develop an extraction procedure	Independent Research	Practical exam
c2	Study analyze drug complexes	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Be able to do homework's and assignments		Workbook Assignments
d2	Work effectively in a team		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	Introduction & States of matter (gases, liquid, solid)	1	2	**a1.2- b1.1- d1.1- d4.1**
2		Phase role	2	2	**a1.2- b1.1- d1.1- d4.1**

3	**Units of measuring**	History of measuring Classification ○ Units of volume ○ Units of weight ○ Units of length ○ International units ○ Other units	3	2	**a1.2- b1.1- d1.1- d4.1**
4	**Liquids**	Physical properties of liquids Types of solution	4	2	**a1.1- a1.2-b1.1- d1.1- d4.1**
5		Measuring methods in the rheology (viscosity ,density) & important in pharmacy.	5	2	**a1.3- b1.2 d1.1- d4.1**
6	**Solids**	Particle size (change of particle size on drug flow and solubility)	6	2	**a1.3- b1.2 d1.1- d4.1**
7		**Midterm exam**	7	2	
8		Measuring of powder flow(Angle of repose) Effect of lubricants on powder flow and compatibility	8	2	**a1.3- b1.2 d1.1- d4.1**
9		Solubility of solids. Determination of solubility . Techniques of aqueous solubility determination of non-ionized, ionized and unstable drugs Factors/ parameters affecting solubility Enhancement of solubility and supersaturation	9	2	**a1.3- b1.2 d1.1- d4.1**
10	**Gases**	Physical properties of gases Types of gases Liquefication of gases Pharmaceutical applications of gases	10	2	**a1.3- b1.2 d1.1- d4.1**
11	**Surface tension**	Definition of Surface tension Surfactants (concepts and types)	11	2	**a1.3- b1.2 d1.1- d4.1**
12		Critical micelle concentration(CMC) Pharmaceutical applications of surfactants	12	2	**a1.3- b1.2 d1.1- d4.1**

13	**Adsorption**	Definition & Adsorption at solid surfaces Application of adsorption (e.g. drug interaction)	13	2	**a1.3- b1.2 d1.1- d4.1**
14	**Drug and formulation stability**	Degradation mechanisms. Pharmaceutical stability problems (hydrolysis, oxidation, photo degradation, …)	14	2	**a1.3- b1.2 d1.1- d4.1**
15		Determination of shelf life and recommended storage conditions.	15	2	**a1.3- b1.2 d1.1- d4.1**
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Lab introduction	1	2	**c1.1- d1.1- d4.1**
2	Types of solutions and factors affecting solubility of solids	2	2	**c1.1-c1.2- d1.1- d4.1**
3	Solubility expression, units and types of drug solutions and their pH	3	2	**c1.1-c1.2- d1.1- d4.1**
4	Solutions of liquids in liquids and gases in liquids	4	2	**c1.1-c1.2- d1.1- d4.1**
5	Factors affecting solubility of liquids in liquids and gases in liquids	5	2	**c1.1-c1.2- d1.1- d4.1**
6	Solving problems about the whole part given from W1-W5	6	2	**c1.1-c1.2- d1.1- d4.1**
7	Revision	7	2	**c1.1-c1.2**
8	**Midterm exam**	8		

9	Difference between surface and interfaces and methods of determination of each	9	2	**c1.3- d1.1- d4.1**
10	Surfactants: types, HLB, functions	10	2	**c1.3- d1.1- d4.1**
11	Micelle formation, shape., Critical micelle concentration: Determination and factors affecting it.	11	2	**c1.3- d1.1- d4.1**
12	Application of surface active agents and functions of SAA according to HLB	12	2	**1.3- d1.1- d4.1**
13	What is meant by Rheology, types of flow	13	2	**c1.3- d1.1- d4.1**
14	Classification of material according to type of flow, thixotropy and application	14	2	**c1.1-c1.2- c1.3**
15	**Final exam**	15		
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

1- Participation& semester work
2- Mid term exam
3- Practical exam
4- Quizzes
5- Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assessment 1 mid term exam	Week 8		
2	Assessment 2 practical	Week 12		
3	Assessment 3 final exam	Week16		

Total		

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1					
2					
3					
4					
5					
Total			100	100%	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1.

2- Essential References:

1.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:**

	Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and collage Administration.

I. Course Identification and General Information:

1	**Course Title:**	**Biochemistry**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	--	2
4	**Study Level/ Semester at which this Course is offered:**	1st Level \2nd Semester			
5	**Pre –Requisite (if any):**	General Chemistry			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Bachelor of Emergency Medicine (B.Sc. in EMS)			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

The course is designed to assist the students to acquire knowledge of the normal biochemical composition and functioning of human body and alterations in understand the biochemistry in diseases for practice of emergency medicine. This course aims to provide students with basic knowledge about structures, classifications of carbohydrates, lipids, proteins, vitamins, enzymes and hormones. In addition to the regulatory mechanisms of metabolic pathway.

III. Course Intended Learning Outcomes (CILOs) :		**Referenced PILOs**	
A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Identify the structure, function and metabolic pathways of carbohydrates, lipids, fatty acids and lipoproteins, nucleotides and their micro-molecules, regulatory mechanisms and their function.	**A1**	Recognize the knowledge retrieved from basic sciences biology, chemistry, anatomy, pathophysiology, histology and physiology, … in the emergency medicine
a2	Demonstrate the disorders in metabolic pathways of proteins, amino acids, enzymes, vitamins, minerals, nucleic acids in humans as well as the mechanism of hormones action on the metabolic pathways regulation.	**A4**	Define the role of emergency medicine practitioner in the assessment and management of common emergencies situations using available resources.
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Compare between the types, structure and metabolism of carbohydrates, lipids, fatty acids, lipoprotein and vitamins with signs, symptoms, biochemical laboratory finding of some metabolic disorders	**B1**	Integrates the results of history, physical and laboratory test findings into a meaningful diagnosis and therapeutic interventions for emergency situations.
b2	Differentiates between normal and abnormal biochemical parameters investigations of proteins, amino acids, enzymes, vitamins, minerals and nucleic acids.	**B2**	Demonstrate skills for the evaluation of new concepts, procedures, techniques and products relevant to emergency medical services
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Apply colorimetric analysis principles in estimation of blood glucose, serum proteins, albumin, lipoprotein, cholesterol, uric acid, urea and creatinine	**C1**	Utilize knowledge and skills in the discipline of emergency care to provide health services appropriate to patient needs, and emergency situations.
c2	Identify laboratory reagents and instruments used in biochemistry laboratory	**C4**	Practice safely and effectively, within their scope of practice in a wider range o f pre and out of hospital urgent and emergency care setting, and within the wider primary care arena.
D. Transferable Skills: Upon successful completion of the course, students will be able to:			

d1	Apply the principles of communication with patient and families using appropriate verbal and nonverbal methods during investigation.	**D1**	Utilizes the value of inter-professional collaborative practice, coordination and interpersonal communication skills when dealing with patients and their families
d2	Utilize the principles of ethics during routine investigations.	**D3**	Awareness of the legal, ethical and commercial restraints and constraints within which emergency medicine.

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
a1	Identify the structure, function and metabolic pathways of carbohydrates, lipids, fatty acids and lipoproteins, nucleotides and their micro-molecules, regulatory mechanisms and their function.	Interactive lecture Seminars and student presentations Brain storming, role-play and simulation Small group for discussing	Assignments Quizzes Mid-term Exam Final exam Presentations
a2	Demonstrate the disorders in metabolic pathways of proteins, amino acids, enzymes, vitamins, minerals, nucleic acids in humans as well as the mechanism of hormones action on the metabolic pathways regulation.	Interactive lecture Seminars and student presentations Brain storming, role-play and simulation Small group for discussing	Assignments Quizzes Mid-term Exam Final exam Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
b1	Compare between the types, structure and metabolism of carbohydrates, lipids, fatty acids, lipoprotein and vitamins with signs, symptoms, biochemical laboratory finding of some metabolic disorders	Interactive lecture Brain storming Role-play & simulation Small group discussions Seminars and student presentations	Assignments Quizzes Mid-term Exam Final exam
b2	Differentiates between normal and abnormal biochemical	Interactive lecture Brain storming	Assignments Quizzes

	parameters investigations of proteins, amino acids, enzymes, vitamins, minerals and nucleic acids.	Role-play & simulation Small group discussions Seminars and student presentations	Mid-term Exam Final exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Apply colorimetric analysis principles in estimation of blood glucose, serum proteins, albumin, lipoprotein, cholesterol, uric acid, urea and creatinine	Case-Based Learning Clinical teaching & learning Laboratory work Role plays & simulation Small group discussion Seminar (Discussions) Practice session Problems solving	Assignments Practical/Clinical examination Reports (Lab Reports.) Lab work Assessment of skills with checklist
c2	Identify laboratory reagents and instruments used in biochemistry laboratory	Case-Based Learning Clinical teaching & learning Laboratory work Role plays & simulation Small group discussion Seminar (Discussions) Practice session Problems solving	Assignments Practical/Clinical examination Reports (Lab Reports.) Lab work Assessment of skills with checklist

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Apply the principles of communication with patient and families using appropriate verbal and nonverbal methods during investigation.	Group work Case Study Role play	Presentations Case Studies Learning activities
d2	Utilize the principles of ethics during routine investigations.	Classroom discussions, Problems solving Case study analysis	Presentations Case Studies Learning activities

I. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	No. of Weeks	Contact hours	Learning Outcomes
1	Introduction to biochemistry	Introduction Definition Normal biochemical processes Impact of the Human Genome Project (HGP) on Biochemistry & Medicine Uses of biochemical investigations and laboratory tests in relation to diseases	**1**	**2**	a1, b1, c1, d1
2	Carbohydrates & carbohydrate metabolism	Definition Properties, structure, composition, and function Classification of carbohydrates o Monosaccharide (derivatives and importance o Disaccharides (Structure, glycosides bonds and importance) o Polysaccharides(Homo- and heterorogenoous and their importance) Introduction to Metabolism Blood glucose regulation Glycolysis and Kreb's cycle Glycogen metabolism Metabolic disorders	**2**	**4**	a1, b1, c1, d1
3	Lipids	Definition Properties, structure, composition and functions Classification of lipids	**2**	**4**	a1, b1, d1
4	Fatty acids	Properties of Fatty acid Eicosanoids Metabolism of fatty acid Metabolic disorders	**1**	**2**	a1, b1, d1
5	Lipoprotein & Cholesterol	Properties Functions Atherosclerosis Investigations and their interpretations	**1**	**2**	a1, b1, c1, d1
6	Midterm exam	Midterm exam	**1**	**2**	a1, b1, c1, d1

7	Proteins	Properties, structure, composition , and importance classification of proteins	**2**	**4**	a2, b2, c2, d2
8	Amino acids	Properties & importance of amino acids Classification and structure of amino acids Amino acid metabolism (Transamination - Deamination – Urea formation)	**1**	**2**	a2, b2, c2, d2
9	Enzymes	Definition Properties of enzymes Mechanism of enzyme action Classification Biological importance of enzymes Factors effecting activity of enzymes	**1**	**2**	a2, b2, c2, d2
10	Vitamins and minerals	Definition Classification Deficiency Absorption Storage Normal concentration Investigations and their interpretations	**1**	**2**	a2, b2, c2, d2
11	Nucleic acids	Properties Importance Types Structure & chemical composition Nucleic acid metabolism	**2**	**4**	a2, b2, c2, d2
12	**Final exam**	**Final exam**	**1**	**2**	a2, b2, c2, d2
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of	Contact H	Learning Outcom
1	Introduction to Biochemistry Lab. Description of biochemistry lab. The used tools and the safety precautions and waste disposal	**1**	2	b1, c1, d1, d2
2	Carbohydrates Molisch test (purposes, reagent, principles and read the results)	**1**	2	b1, c1, d1, d2

3	Polysaccharide Iodine test(as 2)	**1**	2	b1, c1, d1, d2
4	Disaccharides Barafoed and Benedict tests (as 2)	**1**	2	b1, c1, d1, d2
5	Monosaccharide Barafoed and Seliwan off tests (as 2)	**1**	2	b1, c1, d1, d2
6	General scheme of CHO Apply all the previous test	**1**	2	b1, c1, d1, d2
7	Midterm exam	**1**	2	b1, c1, d1, d2
8	Protein Characteristic of protein Separation and precipitation Identify of biuret test	**1**	2	b2, c2, d1, d2
9	Protein types Sulfur test, $AgNo_3$ test Coagulation test of lipids	**1**	2	b2, c2, d1, d2
10	Identify of lipids Characteristics of lipids Solubility test of lipids	**1**	2	b2, c2, d1, d2
11	Identify of lipids and fatty acids types Cupper acetate test Cholesterol test Glycerol test	**2**	4	b2, c2, d1, d2
12	General scheme of CHO, protein and lipids Apply all test of CHO, protein and lipids	**2**	4	b2, c2, d1, d2
13	**Final exam**	**1**	**2**	b2, c2, d1, d2
Number of Weeks /and Units Per Semester		**15**	**30**	

C. Tutorial Aspect:

No.	Tutorial	Number of	Contact	Learning Outcomes
1	None			
2				

3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		**15**	**30**	

V. Teaching Strategies of the Course:

1. Interactive lecture & discussion
2. Laboratory work
3. Role-play and simulation
4. Small group discussion
5. Learning tasks and activities
6. Brain storming
7. Seminars and student presentations
8. Active learning
9. Problems solving

VI. Assessment Methods of the Course:

Assignment
Practical/Clinical examination
Reports (Lab Reports)
Assessment of skills with checklist
Written reports about lab training
Case presentation
Midterm exam
Final exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs
1	**Assignment 1:** Glycolysis and Kreb's cycle	W5	**5**	c1, c2, d1
2	**Assignment 2:** Amino acid metabolism (Transamination - Deamination – Urea formation)	W12	5	c1, c2, d1
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final	Aligned Course Learnin
1	**Assignments**	Weeks 5-12	10	10%	a1, a2, b1, b2
2	**Quizzes 1**	Week 6	5	5%	a1, b1
3	**Mid-Term Theoretical Exam**	Week 8	10	10%	a1, b1, c1, d1
4	**Mid-Term Practical Exam**	Week 7	10	10%	b1, c1
5	**Quizzes 2**	Week 12	5	5%	a2, b2
6	**Final Practical Exam**	Week 15	20	20%	b2, c2
7	**Final Theoretical Exam**	Week 16	40	40%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

Written in the following order: Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): لائم example

1. Ochs R., (2021).Biochemistry, 2nd Ed., India
2. Halkerston ID (2017). The national medical series for independent study: biochemistry. 4th ed. Pennsylvania, Harwal Publishing Co.

2- Essential References:

1. Meisenberg G., & Simmons W., (2017). Principles of medical biochemistry. 4th Ed., China
2. David W, Peter A, Victor W(2001). Haper's review of biochemistry. 19th ed. Middle East Ed, Librairie du Liban.

3- Electronic Materials and Web Sites etc..

Websites:

1. www.ANA.com
2. www.ASCO.com

X. Course Policies: (Based on the Uniform Students' By law (2007) امك كرتن يه

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
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وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

SYLLABUS
YEAR (1)
SEMESTER (2)

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

Standard II: Course Identification and General Information:						
1	**Course Title:**	English Language II				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		2	**NA**	**NA**	**NA**	**2**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

This course is designed to help the student acquire a good command and comprehension of the Medical English terminology through individual, papers and conferences. Students will practice their skills in verbal and written English during clinical and classroom experience.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Identifies basic structures and components of medical terms and names of health problems and how to deal with long Latin of Greek terms and their meanings.
2. Divides the English articles into paragraphs and ideas and memorize and recall information from English articles.
3. Write properly an easy in English.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Identifies basic structures and components of medical terms and names of health problems and how to deal with long Latin of Greek terms and their meanings.	Lecture -Discussion Demonstrate use of dictionary grammar Class-room Conversation Exercise on use of terminology	Short Answers Essay type.

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Divides the English articles into paragraphs and ideas and memorize and recall information from English articles.	Lecture Discussion Exercise on articles	Short Answers Essay type.
B2. Write properly an easy in English.	Lecture Discussion Exercise on articles	Short Answers Essay type.

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
Not Applicable		

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
Not Applicable		

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Medical terminology	▪ Origin of medical terms ▪ Parts of a medical term: prefix, suffix, root ▪ Prefixes related adjectives e.g. numeric (e.g.mono) , size" large and small" (e.g. micro, macro) , dimension "short (e.g. brachy) , speed" slow, fast (e.g. brady, tachy), location (intra, exter, per, ante, post) increased and decreased (e.g. hypo, hyper , mal, olig, a, an), different (e.g. dis, pseud, meta,) , colors (e.g. leuco, erytho) ▪ Suffixes related to science (e.g. -logy, -logist), tests (-scope, -scopy, ----- ▪ -graph, -graphy, , measurement (e.g. -meter), case (-ia, -iasis, -osis,), diseases (e.g.- pathy, -oma, -neoplsm), operations(e.g. –ectomy) ▪ Roots related to body cells (e.g. cyte, cyto) tissues(hist) , organs (vaso, card), chemical names (glyc, hydr, chlor, proteo), sciences (patho, physio, bio) ▪ Multi-roots terms e.g. hyperglycemia ▪ Terms without suffix e.g. erythrocytes ▪ Terms without prefix e.g. cardiology	6	24	A1,B1
2	Midterm exam	Midterm exam	1	2	A1,B1
3	Articles understanding	▪ Basic skills - Comprehensive reading - Overall topic of the article - Paragraphing - Memorizing - Recalling - Answering questions - Making questions ▪ Experimentation of basic skills on a number of Medical articles - Human anatomy (skeletal	5	20	B1

		system) - Infectious diseases - Prevention of disease - Disease treatment - Hypertension - Diabetes - Depression - Cancer - Blood - Burn - Digestive orders			
4	Essay	▪ Basic skills-Body system – Body cavities - Making a correct sentence. - Flow and compatibility of ideas. - Topics (medical and Health sciences)	3	12	B2
5	**Final Term Exam**		1	2	A1,B1,B2
Number of Weeks /and Units Per Semester			**16**	**60**	

V. Teaching strategies of the course
1. Lecture - Discussion 2. Demonstration 3. Brainstorming 4. Case discussions / Seminar

VI. Assignments

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Medical terminology	A1,B1	**5-10**	**5**

VII. Schedule of Assessment Tasks for Students During the Semester

No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	a1,b1,b2
2	Student assignments	5th and 12th week	**5**	**5%**	a1,b1

3	Mid-term exam	7th or 8th week	**20**	**20%**	a1,b1,b2
4	Final-exam	16th -17th week	**70**	**70%**	a1,b1,b2
	Number of Weeks /and Units Per Semester		**100**	**100%**	

VII: Learning Resources:

2. Required Textbook(s) (maximum two).

1. Selva Rose. (1997), Career English for Nurses. Cheiu;ai: OientLongrnanLtd.
2. Quirk, Randolph and Jreenbaum Sidney(1987). A University Grammar of English, Hong Kong: Longman group (FE) Ltd.

3. Essential References.

1. Thomson A. J. and Maitüiet A. V. (1987). A 1icticl English Grammar, Delhi: Oxford University Press.
2. Gimson A. E. (1986). An Introduction to pronunciation of English. Hong kong: Wing King Tong Ca. Ltd.
3. O' Connor J. D, (1986). Better English h'onuwiation. Cambridge:University Press.

4. Electronic Materials and Web Sites *etc*.

1. WWW.encontinouelear.com
2. Http: // www.google. Com

IX. Course Policies:	
1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.
3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

I. Course Identification and General Information:						
1	**Course Title:**	**Anatomy & Physiology 2**				
2	**Course Code & Number:**					
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**	
			Lecture	**Field**		
		3	2	--	2	
4	**Study Level/ Semester at which this Course is offered:**					
5	**Pre –Requisite (if any):**					
6	**Co –Requisite (if any):**					
7	**Program (s) in which the Course is Offered:**					
8	**Language of Teaching the Course:**	English				
9	**Study System:**	Semester Based System				

10	**Mode of Delivery:**	Full Time
11	**Location of Teaching the Course:**	
12	**Prepared by:**	
13	**Date of Approval:**	

II. Course Description:

The anatomy and physiology course is designed to provide the students with an understanding of the basics of the human body structures and functions both at gross and microscopic levels. The course provides an overview of the anatomy and physiology of the nervous system, endocrine system, cardiovascular system, respiratory system, digestive system, urinary system and reproductive system.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs** (مخرجات تعلم البرنامج)	
D. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define terminology, anatomical position, planes, sections, regions of the nervous system and endocrine system	**A1**	
a2	Identify the anatomical significance with the physiological functions and with the clinical conditions of the cardiovascular system, respiratory system, digestive system, urinary system and reproductive system.	**A3**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate the surface markings of clinically important structures	**B2**	
b2	Compare between the sympathetic nervous system and the parasympathetic nervous system	**B3**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Demonstrate the morphology of the nervous system, endocrine system, cardiovascular system and respiratory system on anatomical models	**C1**	

c2	Label a diagram of the anatomic structures of the special organs and the functions of the anatomic structures of each organs	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Utilizes the value of inter-professional collaborative practice, coordination and interpersonal communication skills when dealing with patients and their families	D1	
d2	Apply the principle of professional ethics when dealing with patients and at the end of life care	D3	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Define terminology, anatomical position, planes, sections, regions of the nervous system and endocrine system	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Identify the anatomical significance with the physiological functions and with the clinical conditions of the cardiovascular system, respiratory system, digestive system, urinary system and reproductive system.	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Differentiate the surface markings of clinically important structures	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Compare between the sympathetic nervous system and the parasympathetic nervous system	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam

		▪ Seminars and student presentations	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Demonstrate the morphology of the nervous system, endocrine system, cardiovascular system and respiratory system on anatomical models	▪ Case-Based Learning ▪ Clinical teaching & learning ▪ Laboratory work ▪ Role plays & simulation ▪ Small group discussion ▪ Seminar (Discussions) ▪ Practice session ▪ Problems solving	▪ Assignments ▪ Practical/Clinical examination ▪ Reports (Lab Reports.) ▪ Lab work ▪ Assessment of skills with checklist
c2	Label a diagram of the anatomic structures of the special organs and the functions of the anatomic structures of each organs	▪ Case-Based Learning ▪ Clinical teaching & learning ▪ Laboratory work ▪ Role plays & simulation ▪ Small group discussion ▪ Seminar (Discussions) ▪ Practice session ▪ Problems solving	▪ Assignments ▪ Practical/Clinical examination ▪ Reports (Lab Reports.) ▪ Lab work ▪ Assessment of skills with checklist

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Utilizes the value of inter-professional collaborative practice, coordination and interpersonal communication skills when dealing with patients and their families	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Apply the principle of professional ethics when dealing with patients and at the end of life care	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**The nervous system**	▪ **The nervous system** ○ **The central nervous system** • **Brain** ✓ Development ✓ Protective structures • Divisions of the brain • Areas of specialization • Vascular supply ✓ The meninges ✓ Cerebrospinal fluid ✓ Cns circulation • **The spinal cord** ✓ Development ✓ Protective structures ✓ Divisions ○ **The peripheral nervous system** • **Cranial nerves** ✓ The somatic (voluntary) nervous system ✓ The autonomic (involuntary) nervous system • **Spinal nerve** **Nervous system physiology** ✓ Sensory receptors ✓ Pain pathway ✓ pain control system ✓ Ascending sensory ✓ Descending motor pathways ✓ Motor function ✓ Synaptic junction	4	8	a1, b1, c1, d1
2	**The endocrine system**	▪ **The endocrine system** ○ Hypothalamus ○ Pituitary gland ✓ Posterior pituitary ✓ Anterior pituitary ○ Thyroid gland ○ Parathyroid glands ○ Thymus gland ○ Pancreas ○ Adrenal glands ○ Gonads ✓ Ovaries ✓ Testes ○ Pineal gland **Endocrine physiology**	2	4	a1, c1,d1

		✓ Chemical structure and synthesis of hormones, secretion, transport, and clearance. ✓ Mechanisms of action of hormones, feedback control of hormone secretion. ✓ The pituitary hormones and their control by the hypothalamus ✓ The thyroid metabolic hormones. ✓ The adrenocortical hormones. ✓ Insulin, glucagons, and diabetes mellitus.			
3	**Midterm exam**	**Midterm exam**	1	2	a1, b1, c1, d1
4	**The cardiovascular system**	▪ **The cardiovascular system** ○ **Anatomy of the heart** ✓ Tissue layers ✓ Chambers ✓ Valves ✓ Blood flow ✓ Coronary circulation ○ **Cardiac physiology** ✓ The cardiac cycle ✓ Nervous control of the heart ✓ Electrophysiology ✓ Cardiac depolarization ✓ Cardiac conductive system ○ **Anatomy of the peripheral circulation** ✓ The arterial system ✓ The venous system ✓ The lymphatic system ○ **The physiology of perfusion** ✓ Components of the circulatory system ✓ Oxygen transport ✓ Waste removal	3	6	a2, b2, c2, d2
5	**The respiratory system**	▪ **The respiratory system** ○ **Upper airway anatomy** ✓ The nasal cavity ✓ The oral cavity ✓ The pharynx ✓ The larynx ○ **Lower airway anatomy** ✓ The trachea	2	4	a2, b2, c2, d2

		✓ The bronchi ✓ The alveoli ✓ The lung parenchyma ✓ The pleura ○ **The pediatric airway** ○ **Physiology of the respiratory system** ✓ Respiration and ventilation • The respiratory cycle • Pulmonary circulation ✓ Measuring oxygen and carbon dioxide levels • Diffusion • Oxygen concentration in the blood • Carbon dioxide concentration in the blood ✓ **Regulation of respiration** • Voluntary and involuntary respiratory controls • Nervous impulses from the respiratory center • Stretch receptors • Chemoreceptors • Hypoxic drive ○ Measures of respiratory function			
5	**The abdomen and the digestive system**	▪ **The abdomen** ○ Abdominal vasculature ○ The peritoneum ▪ **The digestive system** ○ The digestive tract ✓ Stomach ✓ Pancreas. ✓ Duodenum ✓ Small intestine and its mesentery ✓ Large intestine ✓ Caecum and appendix ✓ A T D Colon ✓ Pelvic colon ✓ Rectum ✓ Anal canal ○ Accessory organs of digestion ✓ Liver ✓ Pancreas ✓ Gall bleeder ✓ Salivary gland ▪ **The spleen** ▪ **The urinary system**	2	4	a2, b2, c2, d2

		○ The kidneys ✓ Gross and microscopic anatomy of the kidney ✓ Kidney physiology • Overview of nephron physiology • Tubular handling of water and electrolytes • Tubular handling of glucose and urea • Control of arterial blood pressure • Control of erythrocyte development ○ The ureters ○ The urinary bladder ○ The urethra			
6	**The reproductive system**	▪ **The reproductive system** ○ The female reproductive system ✓ The external genitalia • Perineum • Mons pubis • Labia • Clitoris ✓ **The internal genitalia** • Vagina • Uterus • Fallopian tubes • Ovaries ✓ **The menstrual cycle** • The proliferative phase • The secretory phase • The ischemic phase • The menstrual phase ✓ The pregnant uterus ○ **The male reproductive system** ✓ Testes ✓ Epididymis and vas deferens ✓ Prostate gland ✓ Penis	1	2	a2, b2, c2, d2
7	**Final exam**	**Final exam**	1	2	a2, b2, c2, d2
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**The nervous system,**	2	4	**c2**
2	**Endocrine system**	1	2	**c2**
3	**Cardiovascular system**	2	4	**c2**
4	**Respiratory system**	2	4	**c2**
5	**Midterm exam**	1	2	**c1**
6	**Digestive system**	2	4	**c1**
7	**Urinary system**	2	4	**c1, c2**
8	**Reproductive system**	2	4	**c1, c2**
9	**Final exam**	**1**	2	**c1, c2**
Number of Weeks /and Units Per Semester		**15**	30	

V. Teaching Strategies of the Course:

1. Interactive lecture
2. Seminars and student presentations
3. Brain storming
4. Role-play and simulation
5. Small group discussion
6. Learning tasks and activities
7. Problems solving
8. Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1**: Endocrine hormones	W5	**5**	a1, d1
2	**Assignment 2:** Menstrual cycle	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	Weeks 5-11	10	10%	a1, a2, b2, c2, d1
2	**Quizzes 1**	Week 6	5	5%	a1, b1, c1, d1
3	**Mid-Term Theoretical Exam**	Week 7	10	10%	a1, b1, c1, d1
4	**Mid-Term Practical Exam**	Week 7	10	10%	b1, c1,
	Quizzes 2	Week 12	5	5%	a2, b2,
	Final Practical Exam	Week 15	20	20%	b2, c2, d2
	Final Theoretical Exam	Week 16	40	40%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1. Heylings D., Leinster S., Carmichael S., Saada J., Logan B., and Hutchings R., (2018). McMinn's Concise Human Anatomy. 2nd Ed.; Taylor & Francis Group, LLC
2. Jones S., (2017). Pocket Anatomy & Physiology. 3rd Ed. F. A. Davis Company, Philadelphia
3. Bledsoe B., Porter, R., & Cherry, R., (2014). Pearson New International Edition, Essentials of Paramedic Care Update, 2nd Ed., Pearson Education Limited

2- Essential References:

1. Sanders, M., & McKenaa k., Tan, D., Pollak A., and Mejia A., (2019). Sanders' Paramedic Textbook 5th Ed., USA.
2. LaPres J., Kersten ., and Tang Y., (2016). Gunstream's Anatomy & Physiology With Integrated Study Guide. 6th Ed. McGraw-Hill

3- Electronic Materials and Web Sites etc.:
Websites: ▪

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

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الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:					
1	**Course Title:**	**Biochemistry1**			
2	**Course Code & Number:**	**BC 1204**			
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	0	2
4	**Study Level/ Semester at which this Course is offered:**	**First Year: Second Semester**			
5	**Pre –Requisite (if any):**	Biology			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Diploma in Medical Laboratory Technology (DMLT)			
8	**Language of Teaching the Course:**	English and Arabic			
9	**Study System:**	Credit Hour System- Semester			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**	CC Campus(Public and private community colleges)			
12	**Prepared by:**	Prof. Ali Al-Miri			
13	**Date of Approval:**				

II. Course Description:
This course provides an overview of the main aspects about structural formula, digestions, absorption metabolism of carbohydrate, lipids, proteins, nucleic acid, body fluids and diseases of metabolic abnormalities. The practical part includes studying blood collection, anticoagulants, and separation of serum and plasma. Perform some basic chemical testes to identify different sugars, lipids and proteins.

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**	**Referenced PILOs** **(مخرجات تعلم البرنامج)**

E. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Understand the important of biochemistry in field of laboratory techniques	**A1**	Know all the fundamental information in medical laboratories.
a2	Understand diseases of metabolic abnormalities.	**A4**	Understand the specialized laboratory materials, theoretically and practically, in line with advanced scientific progress.
a3	Identify the chemical structure of carbohydrate, lipids, proteins.	**A5**	Know and understand all laboratory tests, their abbreviations, their importance, the method of taking them, and the interpretation of their results.
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Describe carbohydrate, lipids, proteins metabolism.	**B2**	Review and critique manual laboratory processes that include patient preparation, sample requirements, solutions preparation, examination procedures, calculation of results and quality assurance.
b2	Discuss important of vitamins enzyme and mineral in biochemistry.	**B6**	Collect, treat, and analyze samples and interpret the results with high efficiency.
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Collect, transport, preserve and store blood samples according to Standard Operating Procedures (SOPs).	**C1**	Collect samples from patients in a safe professional manner.
c2	Use the instrument and devices in biochemistry lab.	**C3**	Use advanced laboratory equipment effectively and responsibly with the application of quality systems.
c3	Perform some basic chemical testes to identify different sugars, lipids and proteins.	**C4**	Perform laboratory experiments and scientific interpretation of the results of laboratory tests.

D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Work independently or as a team member and effectively communicate with the teaching hematology staff and colleagues to identify, analyze and understand emerging issues.	**D1**	Work as a team.
		D2	Respect patients, colleagues, and superiors and maintain the privacy of patient information.

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Understand the important of biochemistry in field of laboratory techniques	-Interactive Lectures - Group Discussion - Self study	- Quizzes - Assignments & Homework - Mid-semester exam -Final exams
a2	Understand diseases of metabolic abnormalities.	-Interactive Lectures - Presentation - Group Discussion	-Quizzes -Assignments & Homework -Mid-semester exam -Final exams
a3	Identify the chemical structure of carbohydrate, lipids, proteins.	-Interactive Lectures - Presentation - Group Discussion	-Quizzes -Assignments & Homework -Mid-semester exam -Final exams

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Describe carbohydrate, lipids, proteins metabolism.	- Interactive Lectures - Seminars -Oral presentations	- Quizzes - Assignments - Mid semester exam -Final exams
b2	Discuss important of vitamins enzyme and mineral in biochemistry.	- Interactive Lectures - Self-learning - Brain storming	- Quizzes - Assignments -Midterm Exam -Final Exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Collect, transport, preserve and store blood samples according to Standard Operating Procedures (SOPs).	- Demonstrations -Group discussion	-Quizzes - Mid semester exam -Final exams
c2	Use the instrument and devices in biochemistry lab.	- Group discussion - Animations - Scenarios and Problem Solving	- Quizzes - Assignments - Mid semester exam -Final exam
c3	Perform some basic chemical testes to identify different sugars, lipids and proteins.	- Group discussion - Animations - Scenarios and Problem Solving	- Quizzes - Assignments - Mid semester exam - -Final exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Work independently or as a team member and effectively communicate with the teaching hematology staff and colleagues to identify, analyze and understand emerging issues.	- Presentations - Group discussions & seminars -Self-study modules	- Write reports -Write Exercises & solving it. - Assignments &Homework

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction to biochemistry**	-Definition -Classification of carbohydrates -biomolecule -biochemistry in medicine	1	2	al, a2,b1,b2
2	**Carbohydrates**	-Definition -important of carbohydrate -classification of carbohydrate-types of isomer	3	6	a1-a3, b1 ,b2,c1-c3,d1

		-cyclic form of carbohydrates -properties of carbohydrates -sugar derivatives -structure of monosaccharide disaccharides , poly saccharides.			
3	**Proteins**	-Definition of Protein -Amino acids ,classification -Protein function (important) -Peptide bond and polypeptide -protein structure -protein classification	2	4	a1,a2, a3,b1 ,b2,c1-c3,d1
4	**Enzyme**	-Definition -Classification of enzyme-mode of enzyme action -Factors affecting enzyme activity -Definition of Km and cofactor	2	4	a1,a2, a3,b1 ,b2,c1-c3,d1
5	**Midterm exam**	MCQs, matching, short-answer,…etc.	1	2	a1,a2,a3 b1,b2
6	**Nucleic acids**	-Important of nucleic acid -Types of nucleic acid (DNA and RNA -structure(nucleotide, nucleoside)	2	4	a1,a2, a3,b1 ,b2,c1-c3,d1
7	**Lipids**	-Definition ,important -Classification of lipids -Fatty acids - Classification of fatty acids -Essential ,non essential -saturated ,unsaturated -cholesterol structure, function -classification of lipoprotein Function of lipoprotein	2	4	a1,a2, a3,b1 ,b2,c1-c3,d1
8	**Vitamins**	-Definition, Classification of vitamins(water soluble, fat soluble) and Deficiencies of vitamins	2	4	a1,a2, a3,b1 ,b2,c1-c3,d1
9	**Minerals**	**Minerals :** Calcium ,phosphate ,magnesium Water and minerals (Na^+ ,K^+ ,HCO_3 Cl)	1	2	a1,a2, a3,b1 ,b2,c1-c3,d1
10	**Final exam**	-Fill in the blank, MCQs, matching, short-answer and short essay questions.	1	2	a1-a3, b1 ,b2,c1-c3,
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	-Biosafety procedures in laboratory practice -Anticoagulants preparation, use, mode of action - Instruments and equipment in biochemistry lab.	1	2	a1, a2, b1,b2 c1-c3,d1
2	-Venous and capillary blood collection - Blood separation, plasma and serum preparation	1	2	a1, a2, b1,b2 c1-c3,d1
3	**Carbohydrate** Molish test Iodine test Benedict test Bara food test Selwanof test	3	6	a1, a2, b1,b2 c1-c3,d1
4	**- Med-Term Exam.**	1	2	c1-c3,d1
5	**Protein** - Biurret test - Iso electric test - Heat and acetic acid test - Glycoxylic and test	3	6	a1, a2, b1,b2 c1-c3,d1
6	**Lipids identification** Cholesterol, Triglycerides, HDL,LDL	3	6	
6	**Enzymes kinetics**	1	2	a1,a2, a3,b1 ,b2,c1-c3,d1
7	**Review**	1	2	a1, a2, b1,b2 c1-c3,d1
8	**Final Exam**	1	2	a1, a2,a3 b1,b2 c1-c3
Number of Weeks /and Units Per Semester		15	30	

V. Teaching strategies of the course:

- Interactive Lectures
- Dialogue and Discussion
- Self-Learning
- Presentation
- Seminars
- Brain storming
- Group discussion
- Analyzing , Reporting the results
- Lab. logbook and report
- Practical Training

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Written Exam
- Final Practical Exam
- Lab. logbook and reports
- Assignments &Homework
- Group work
- Oral discussion

VII. Assignments:

No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1	**Assignment :** Searching information about related subjects of **fundamentals of biochemistry** in Medical Laboratory Technology	d1	3-13th	5
	TOTAL			**5**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	3-13th	5	5 %	d1
2	**Quiz**	6th	5	5 %	a1,a2, a3 b1,b2
	Mid-Term Practical Exam	6th	10	10 %	c1-c3,d1
3	**Mid-Term Theoretical Exam**	7th	10	10 %	a1,a2, a3 b1,b2
4	**Logbook(Practical report)**	weekly	10	10%	c1-c3
5	**Final Practical Exam**	15th	20	20%	a1,a2, a3,b1 ,b2,c1-c3
6	**Final Theoretical Exam**	16th	40	40 %	a1,a2, a3,b1 ,b2,c1-c3
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, Title, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two):

1 -Victor W. Rodwell, David A. Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil, (2018), **Harper's Illustrated Biochemistry 31th** edition, New York : Mcgraw-Hill Education,

2- R. A. Harvey PhD, D. R. Ferrier P. C. Champe (2018), **Biochemistry** (Lippincott's Illustrated Reviews Scries), 8th edition, Lippincott Williams & Wilkins, USA.

2- Essential References:

1- Rifai, Nader, Andrea R. Horvath and Carl T. Wittwer(2019). Tietz **Fundamentals of Clinical Chemistry and Molecular Diagnostics**. 8 th ed. St. Louis, Elsevier,. (NEW EDITION)

2- MN Chatterjea, Rana shinde (2013), **Medical Biochemistry**, 8th edition, Jitendra P Vij, Panama.

3- Electronic Materials and Web Sites etc.:

Websites:

1--https://www.biochemistrv.org/

2. www.biochemi.org/bi/default.htm

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

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Standard II: Course Identification and General Information:

1	**Course Title:**	Psychology				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		1	**NA**	**NA**	**NA**	**1**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

In this course the learners will acquire understanding of the behavior of individuals. This course in psychology will expose the learners to the theories, perceptions and the explanations for patients and clients behavior and enable them to respond appropriately.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Demonstrate understanding of the uniqueness of individuals and its effect on their behavior.
2. Analyze methods of psychology, various cognitive processes, determinants and their applications.
3. Recognize motivation, emotions, stress, attitudes, personality and their influence on behavior.
4. Explain the psychological assessments and test.
5. Recognize the development stage of human according to various psychological theories.
6. Establish and maintain effective and appropriate therapeutic relationships.
7. Assist and support clients during stressful events and aid them in making informed decisions.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Explain the biology of Human behavior.	Lecture discussion Brain storming	Essay type Short answer

A2. Describe the psychometric assessments of cognitive processes	Lecture discussion Brain storming	Essay type Short answer
A3. Describe the concepts of behavior, conflicts, frustration, and conflict resolution	Lecture discussion Brain storming	Essay type Short answer
A4. Recognize the alterations in emotions	Lecture discussion Brain storming	Essay type Short answer
A5. Discuss the personality alterations according to various psychological theories.	Lecture discussion Brain storming	Essay type Short answer
A6. Identify the principles of growth and development	Lecture discussion Brain storming	Essay type Short answer
A7. Explain the psychological assessments tests	Lecture discussion Brain storming	Essay type Short answer

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Recognize motivation, emotions, stress, attitudes, personality and their influence on behavior.	Lecture discussion Role plays Case discussion Demonstration.	Essay type Short answer
B2. Analyze methods of psychology, various cognitive processes, determinants and their applications.	Lecture discussion Role plays Case discussion Demonstration.	Essay type Short answer
B3. Discuss the role of medical assistant in supporting and maintaining of client's psychological state.	Lecture discussion Role plays Case discussion Demonstration.	Essay type Short answer

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
Not Applicable		

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies

Not Applicable		

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Introduction to psychology	▪ History and origin of science of psychology ▪ Definitions & Scope of Psychology ▪ Relevance to medical assistant, Methods of ▪ Psychology	1	2	B3
2	Biology of behavior	▪ Body mind relationship modulation process in health and illness ▪ Genetics and behavior: ▪ Heredity and environment ▪ Brain and behavior: Nervous System, Neurons and synapse, ▪ Association Cortex, Rt and Lt Hemispheres ▪ Psychology of Sensations ▪ Muscular and glandular controls of behavior ▪ Nature of behavior of an organism/Integrated responses	1	2	A1
3	Cognitive processes	▪ Attention: Types, determinants, Duration & degree, alterations ▪ Perception: Meaning, Principles, factors affecting, Errors, ▪ Learning: Nature, Types, learner and learning, Factors influencing, laws and theories, process, transfer, study habits ▪ Memory: Meaning, Types, Nature Factors influencing, Development Theories and methods of memorizing and Forgetting ▪ Thinking: Types and levels, stages of development,	4	8	A2, B2

		Relationship with language and communication ▪ Intelligence: Meaning, classification, uses, theories ▪ Aptitude: Concept, types, Individual differences and variability ▪ Psychometric assessments of cognitive processes ▪ Alterations in cognitive processes ▪ Applications			
4	Midterm exam	Midterm exam	2	4	A5
5	Motivation and Emotional Processes	▪ Motivation: Meaning, Concepts, Types, Theories, Motives and behavior, Conflicts and frustration, conflict resolution ▪ Emotions & stress ○ Emotion: Definition, components, Changes in emotions, theories emotional adjustments, emotions in health and illness ○ Stress: stressors, cycle, effect, adaptation & coping ▪ Attitude: Meaning, nature, development, factors affecting, Behaviour and attitudes ▪ Attitudinal change Psychometric assessments of emotions and attitudes ▪ Alterations in emotions ▪ Applications	2	4	A3, A4, B1
6	Developmental and Personality Theories (ISTS)	- Fraud, Jung, Sullivan, Piaget, Rogers, Erikson, Others ▪ Psychometric assessments of personality ▪ Alterations in personality ▪ Applications	1	2	A5, B1
7	Principles of Growth and	▪ Pre-Natal, neo-natal, infant, toddler, pre-school child,	3	6	A6

	Development Life-Cycle	school child, adolescent, ▪ Psychology of groups			
8	Psychological assessment & tests	▪ Types, development, Characteristics, Principles, Uses, Interpretations. ▪ Role of nurse in psychological assessment and in the supporting and maintaining of client's psychological state.	1	2	A7, B3
11	Final exam	Final exam	1	2	A1, A2, A3, A4, A5, A6, A7, B1, B3
Number of Weeks /and Units Per Semester			**15**	**30**	

B – Practical Aspect:

Order	Task/ Experiments	**Number of Weeks**	**contact hours**	**Learning Outcomes**
	Not Applicable			
	Number of Weeks /and Units Per Semester			

V. Teaching strategies of the course

1. Lecture
2. Discussion
3. Brainstorming
4. Case discussions

VI. Assignments

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Role of medical assistant in the supporting and maintaining of client's psychological state.	A3, A4, A7, B3	**2-10**	**10**

VII. Schedule of Assessment Tasks for Students During the Semester

No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	A1, A2,A3, A5, B1,B2
2	Student assignments	5th and 12th week	**5**	**5%**	A3, A4, A7, B3
3	Mid-term exam	7th or 8th week	**20**	**20%**	A1, A2, B2, B3
4	Final-exam	16th -17th week	**70**	**70%**	A1, A2, A3, A4, A5, A6, A7, B1, B3

Clinical Part					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
	Not Applicable				

VII: Learning Resources:

1. Required Textbook(s) (maximum two).

1. Feldman. R. H (1996). Understanding Psychology. New Delhi: Tata McGraw hill.
Morgan et al (2003). Introduction to Psychology. New Delhi: Tata McGraw hill.

1. Essential References.

1. Lefton(2009). Psychology. Boston: Alwin & Bacot Company.
Mangal, S.K (2002). Advanced Educational Psychology. New Delhi: prentice hall.

2. Electronic Materials and Web Sites *etc*.

1. www.PSYCHOLOGY .com
2. Encyclopedia of psychology, www.psychology .org
3. American Psychological Association, www.apa.org
4. Guides to resources, library.ust.hk
5. http://www.google.com

IX. Course Policies:	
1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.

3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

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Standard II: Course Identification and General Information:

1	**Course Title:**	Public Health				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		2	**NA**	**NA**	**NA**	**2**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

This course is designed to help students acquire the concept of health, understanding of the principles of environmental health and education of community members about health, personal health and proper sanitation.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Describe the concept of environmental health
2. Describe the principles of environmental health
3. Demonstrate skills to apply these principles in the pursing care of the patients/clients as well as in their own healthy living.
4. Describe the environmental health hazards and health problems of the country and services available to meet these.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Discuss the basic principles of environmental health	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A2. Recognize water borne diseases	Lecture - Discussion	Essay question

	Demonstration Brainstorming	Short answer question Objective type
A3. Methods of controlling pollutions	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A4. Determine the requirements of healthy housing conditions	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A5. Discuss the importance of proper sanitation	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A6. Identify the components of personal health	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A7. Recognize methods of insects control	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A8. List of diseases transported by insects	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A9. Describe the components of school health program.	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type
A10. Advice appropriate balance diet and suggest any dietary modification	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Compare between methods of water purification	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type.
B2. Differentiate between natural and artificial lighting	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type.
B3. Discuss methods used to control cholera in your community	Lecture - Discussion Demonstration Brainstorming	Essay question Short answer question Objective type.

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
C1. Perform water purification using chlorine or solar	Lecture Discussion Class-room Conversation Assignments	Essay question Short answer question Objective type
C2. Design a health teaching program to maintain proper sanitation	Lecture Discussion Class-room Conversation Assignments	Essay question Short answer question Objective type

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
D1. Engage in educational activities related to environmental health issues.	Role play Practice session Supervised clinical practice	Assess role plays with check- list on teaching techniques Assess health talk with checklist Assess performance with rating scale
D2. Employ effective communication and accurate documentation while dealing and/or managing environmental problems	Role play Practice session Supervised clinical practice	Assess role plays with check- list on teaching techniques Assess health talk with checklist Assess performance with rating scale

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Introduction	▪ Components of environment ▪ Importance of environmental health. ▪ Concepts of environmental health ▪ Principles of environmental health	2	4	A1, A6

		▪ Personal health			
2	Water supply	▪ Safe and wholesome water ▪ Uses of Water ▪ Water pollution ▪ Water borne diseases. ▪ Water purification	2	4	A2, A3, B1, C1
3	Air & Noise Pollution	▪ Air ▪ Air pollution ▪ Prevention and control of air Pollution Noise ▪ Source of noise ▪ Community noise levels ▪ Effects of noise ▪ Noise control	1	2	A3
4	Housing condition	▪ Site ▪ Basic amenities ▪ Types & standard of ventilation ▪ Requirements of good lighting. ▪ Natural and artificial lighting.	2	4	A4, B2
5	Mid Term Exam	Mid Term Exam	1	2	A1, A2, A3, A4, B1, B2, C1
6	Environmental sanitation	▪ Refuse ▪ Excreta ▪ Sewage ▪ Health hazards of these wastes ▪ Collection removal and disposal of these wastes	2	4	A5
7	Arthropods of Public Health	▪ Mosquitoes, Housefly ▪ Sand fly, human louse, etc. ▪ Rodents. ▪ Control measures for arthropods	2	4	A7, A8
8	School health	▪ Periodic medical examination of the children and teachers. ▪ Immunization of the children	2	4	A9

		in the school. ▪ Health promotion & education ▪ Mid-day meals. ▪ Requirements for school health ▪ Facilities for school health			
9	Food	▪ Common sources of various nutrients and special nutritional requirements ▪ Nutritional assessment (clinical, anthropometric and diet survey tools). ▪ Appropriate balance diet and suggested dietary modification ▪ Common nutrition related health disorders (like protein energy malnutrition, obesity, anemia, iodine deficiency, fluorosis, food toxin diseases) and their control and management. ▪ Nutritional promotion and education. ▪ Elements of healthy foods	1	2	A10
8	**Final Term Exam**		1	2	A5, A7, A8, A9, A10,
Number of Weeks /and Units Per Semester			**16**	**32**	

V. Teaching strategies of the course
1. Lecture - Discussion 2. Demonstration; 3. Brainstorming 4. Case discussions / Seminar

VI. Assignments

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Water purification	A2, A3, B1, C1	**4-7**	**2.5**
2	Mosquitoes control	A7, A8	**8-12**	**2.5**

VII. Schedule of Assessment Tasks for Students During the Semester					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	A1, A2, A3, A4, A5, A7, A8, A9, A10, B1, B2, C1
2	Student assignments	5th and 12th week	**5**	**5%**	A2, A3, A7, A8, B1, C1
3	Mid-term exam	7th or 8th week	**20**	**20%**	A1, A2, A3, A4, B1, B2, C1
4	Final-exam	16th -17th week	**70**	**70%**	A5, A7, A8, A9, A10
	Number of Weeks /and Units Per Semester		**100**	**100%**	

VII: Learning Resources:

3. Required Textbook(s) (maximum two).

1. James F, Robert R. Pinger& Jerome E. KotEcli, (2002), An Introduction to Community Health 4th edition.
2. Lundy K. and Jons S., (2009): Community Health Nursing, Caring for Public Health. 2nd ed Jones and Barllett Comp.

5. Essential References.

3. Basavanthappa. BT., (2008): Community and public Health Nursing, 2nd ed., Mosby An Affiliate of Elsevier Co., United States of America.
4. Maurer F. and Smith C. (2009): Community / Public Health Nursing Practice , Health for all Families and pupulations. Sunders, Elsever.

6. Electronic Materials and Web Sites *etc*.

1. http://www.mohp.gov.eg
2. http://www.google.com

IX. Course Policies:	
1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.

3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

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Standard II: Course Identification and General Information:

1	**Course Title:**	Microbiology & Parasitology				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		2	**NA**	**NA**	**NA**	**2**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

This course is designed to enable students to acquire knowledge, attitude and behaviors of fundamentals of microbiology and parasitology, and its effects on human. It also provides understanding on causes of diseases, diagnosis, treatments and preventive measures.

Standard IV: Professional Information:

Aims of The Course:

This course aims to acquire student:

1. Describes structure, classification morphology and growth of bacteria
2. Identifies microorganisms and describe the different disease producing organisms
3. Explains the concept of immunity, hyper sensitivity and immunization
4. Applies staining techniques, Gram staining, Acid fast staining, Hanging drop preparation and culture various medias.
5. Collects, handle and transport of various specimens.
6. Identifies the classification, types, morphology, lifecycle, pathogenicity, transmission, diagnosis and pathology of various parasites.
7. Selects the appropriate methods of control and prevention.
8. Determines the investigation of parasites

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. List the common microorganisms	Lecture Discussion Demonstration	Short answer questions

	Brain storming	Objective type
A2. Identifies microorganisms and describe the different disease producing organisms	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A3. Describe method of control for microorganisms	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A4. Explains the concept of immunity, hyper sensitivity and immunization	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A5. Discuss the classification of parasites	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A6. Identify classification of protozoa	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A7. Discuss the prevention and control of giardia lamblia	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A8. Recognize the life cycle of malaria	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A9. Identify classification of helminths	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type
A10. List common parasitic diseases	Lecture Discussion Demonstration Brain storming	Short answer questions Objective type

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Compare between the growth of bacteria and viruses	Lecture discussion Demonstration	Short answer questions

	Brain storming	Objective type
B2. Discuss the effect of parasite on the host	Lecture discussion Demonstration Brain storming	Short answer questions Objective type
B3. Different between Entamoeba histolytica and Entamoeba coli ciliate	Lecture discussion Demonstration Brain storming	Short answer questions Objective type
B4. Compare between visceral & cutaneous Leishmaniasis	Lecture discussion Demonstration Brain storming	Short answer questions Objective type
B5. Discuss malaria control	Lecture discussion Demonstration Brain storming	Short answer questions Objective type

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
C1. Discuss collection, handling, and transportation of various specimens	Lab Practice Supervised Clinical practice	Short answer questions Objective type
C2. Determines the lab investigations for Common parasites.	Lab Practice Supervised Clinical practice	Short answer questions Objective type

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
Not Applicable		

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	General characteristics of microbes	▪ Definition ▪ Types (bacteria, virus, fungi, …) ▪ Characteristics ▪ Structure and classification of microbes	2	4	

		▪ Growth and nutrition of microbes ▪ Multiplication ▪ Lab investigation ▪ Culture & sensitivity			
2	Pathogenic organisms	▪ Micro-organisms ▪ Bacteria - Cocci- gram positive and gram negative - Bacilli-gram positive and gram negative - Spirochaete - Mycoplasma - Rickettsiae - Chlamydiae ▪ Viruses ▪ Fungi-superficial and deep mycoses ▪ Rodents & vectors characteristics, source, portal of entry, transmission of infection ▪ Identification of disease producing micro-organisms ▪ Collection, handling and transportation of various specimens ▪ Lab investigation for microorganisms ▪ Method of controlling micro-organisms	3	6	
3	Immunity	▪ Immunity-Types, classification ▪ Antigen and antibody Reaction ▪ Hypersensitivity-skin test ▪ Serological tests ▪ Immunoprophylaxis ✓ Vaccines & sera –types, classification, storage & handling ✓ Immunization for various diseases	1	2	
4	Midterm Exam	Midterm Exam	1	2	
Part II: Parasite					
5	Parasites	▪ Definition ▪ Types ▪ Host, Types of host			

		▪ Definition and example for types of parasite ▪ Effect of parasite on the host ▪ Types of vector ▪ Source of infection (food & drink, soil and water, vector, direct contact and congenial) ▪ Mode of infection ▪ Classification ✓ Protozoa ✓ Helminthes ✓ Arthropods ▪ Class and example for all Protozoa	1	2	
6	Protozoa	▪ General characteristic ✓ Morphology ✓ Biological feature ✓ Multiplication ✓ Nutrient & locomotion ▪ Classification (flagellate, ciliate, amoebae, sporozoa) ▪ Amoebae ▪ Entamobea histolytica ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control ▪ Different between Entamobea histolytica and Entamobea. coli ciliate ▪ Bantium coli ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control	1	2	
7	Flagellates	▪ Intestine & flagellates Giardia lamblia ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control ▪ Genital Trichomnas vaginalis ✓ Morphology,	1	2	

		✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control			
8	Blood flagellates	▪ Leishmanias (Visceral & cutanous) ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control	1	2	
9	Sporozoa	▪ Malaria parasites (Plasmodium Falciparum, vivax) ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control	1	2	
10	Helminthes	▪ Classification ✓ Nematodes ✓ Cestodes ✓ Trematodes	1	2	
11	Schistosoma	▪ Schistosoma ✓ Definition ✓ Morphology, ✓ life cycle, ✓ pathogenesis ✓ Diagnosis ✓ Prevention & control	1	2	
12	**Final Term Exam**		1	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

V. Teaching strategies of the course
1. Lecture – Discussion 2. Demonstration 3. Brainstorming

VI. Assignments				
No	Assignments	Aligned CILOs (symbols)	Week Due	Mark

1	Vaccine's sera-types, classification, storage & handling		**4-7**	**2.5**
2	Life cycle, pathogenesis, diagnosis, prevention and control of malaria.		**8-12**	**2.5**

VII. Schedule of Assessment Tasks for Students During the Semester					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**10**	**10%**	
2	Student assignments	5th and 12th week	**10**	**10%**	
3	Mid-term exam	7th or 8th week	**20**	**20%**	
4	Final-exam	16th -17th week	**60**	**60%**	

VII: Learning Resources:

1. Required Textbook(s) (maximum two).

1. Greenwood E (2001). Medical Microbiology. Churchill livings tone Edinburgh, London.

2. Essential References.

7. Foundation of Microbiology (2003). 2nd ed. Talaro and A. Talaro, published by William Brown Publishers.

3. Electronic Materials and Web Sites *etc*.

1. Http: // www.google. Com
2. Http:// www.yahoo.com

IX. Course Policies:	
1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.
3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from

	starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

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Standard II: Course Identification and General Information:

1	**Course Title:**	**Infection control basics**				
2	**Course Number & Code:**					
3	**Credit hours:**	**C.H**				**Total**
		Th.	**Pr.**	**Tut.**	**Tr.**	
		1	**2**	**NA**	**NA**	**2**
4	**Study level/year at which this course is offered:**					
5	**Pre –requisite (if any):**					
6	**Co –requisite (if any):**					
7	**Name of faculty member responsible for the course:**					
8	**Program (s) in which the course is offered:**					
9	**Language of teaching the course:**					
10	**Location of teaching the course:**					
11	**Prepared By:**					
12	**Approved By:**					

Standard III: Course Description:

Each year, lives are lost due to the spread of infections in hospitals and other healthcare settings. Infection control procedures are a vital part of health care and patient safety measures used by every member of the healthcare team both in the United States and globally.

Standard IV: Professional Information:

Aims of The Course:

Brief summary of the knowledge or skill the course is intended to develop:

1. Identify the role of healthcare-associated infections in patient safety.
2. List the five most common, preventable healthcare-associated infections.
3. Explain the human biome.
4. Discuss the five categories of Standard Precautions.
5. List the three elements necessary for disease transmission.
6. Explain the three categories of Transmission-Based Precautions.

Intended learning outcomes (ILOs) of the course:

A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
A1. Knowledge and understanding of the principles of evidence-based medicine.	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type

A2. Knowledge and understanding of the normal structure, function and development of the human body and mind at all stages of life and body-mind interactions. Knowledge and understanding of the genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic noxious effects on the body and mind	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A3. Knowledge and understanding of the etiology, pathogenesis, pathology, symptoms and signs, natural history, and prognosis of mental and physical disorders in all age groups listed in the appendix and designed as "common".	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A4. Knowledge and understanding of common diagnostic procedures, indications, contra-indications and limitations listed in the App. 2. Knowledge of the appropriate use of laboratory techniques and hygiene and sanitization, asepsis, infection control, transmission.	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A5. Knowledge and understanding of the action, metabolism, and toxic effects of drugs and their therapeutic applications, indications, contraindications and side effects	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A6. Identify of the principles of health maintenance, education, prevention and screening. Knowledge and understanding of the epidemiology of common diseases and conditions and the systematic approaches in reducing the incidence and prevalence of those diseases.	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A7. Knowledge and understanding of the normal structure and function of the body and of each of its major organ systems	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type
A8. Knowledge and understanding of molecular, biochemical, and cellular mechanisms of maintaining homeostasis	Lecture -discussion Role play Brainstorming	Essay type Short answer Objective type

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
B1. Compare between descriptive and experimental epidemiological studies and measures of risk.	Lecture discussion Demonstration Case discussions / Seminar.	Essay type Short answer Objective type
B2. Analyze determinant of health and principles of preventive and control of common health problems.	Lecture discussion Demonstration Case discussions / Seminar.	Essay type Short answer Objective type

B3. Discuss methods of control of communicable diseases	Lecture discussion Demonstration Case discussions / Seminar.	Essay type Short answer Objective type
B4. Compare between morbidity and mortality	Lecture discussion Demonstration Case discussions / Seminar.	Essay type Short answer Objective type
B5. Design a screening program.	Lecture discussion Demonstration Case discussions / Seminar.	Essay type Short answer Objective type

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
C1. Provides preventive and therapeutic approaches taken towards the major endemic diseases.	Lecture discussion Demonstration Brainstorming	Essay type Short answer Objective type
C2. Implement epidemiological studies based on observation	Lecture discussion Demonstration Brainstorming	Essay type Short answer Objective type
C3. Provide safe, effective care to patient in different age & groups.	Lecture discussion Demonstration Brainstorming	Essay type Short answer Objective type
C4. Apply infection control measures.	Lecture discussion Demonstration Brainstorming	Essay type Short answer Objective type
C5. Design a screening program.	Lecture discussion Demonstration Brainstorming	Essay type Short answer Objective type

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning	Outcomes Teaching strategies	Assessment Strategies
D1. Communicates effectively with individuals, families, and communities.	Lecture discussion Demonstration Role play	Short answer Objective Type
D2. Employ effective communication and accurate documentation while providing methods of control of communicable diseases	Lecture discussion Demonstration Role play	Short answer Objective Type

D3. Use an internet and computer while studying observational and experimental studies	Lecture discussion Demonstration Role play	Short answer Objective Type

V: Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect:

Order	Topic List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Introduction To epidemiology	▪ The historical context. ▪ Definition of epidemiology ▪ Objectives of epidemiology. ▪ Uses of epidemiology	1	2	A1
2	Concepts of Disease Occurrence	▪ Epidemiologic Triangle (Triad) ▪ Epidemiologic Concepts	1	2	A2, A3
3	Chain of Infection	▪ Reservoir ▪ Portal of exit ▪ Modes of transmission ▪ Portal of entry ▪ Host	1	2	A4
4	Levels of prevention	▪ Definition of prevention ▪ Levels of prevention: - Primary prevention - Secondary prevention - Tertiary prevention	1	2	A5, B2
5	Methods of control of communicable diseases	▪ Main methods of control ✓ Elimination of Reservoir of Infection ✓ Interruption of Transmission ✓ Susceptible Host Protection ▪ General methods for control of communicable diseases ✓ Preventive Measures report ✓ Control of Patient, Contact and Environment ✓ Epidemic Measures ✓ International Measures ▪ Medical assistant function in communicable diseases control	1	2	A6, B3, C1, D2
6	Measures of risk	▪ Frequency Measures ▪ Morbidity Frequency Measure ▪ Mortality Frequency Measures ▪ Birth Measures	1	2	B1, B4

		▪ Measures of Association			
7	Midterm exam	Midterm exam	1	2	A1, A2, A3, A4, A5, A6, B1, B2, B3, B4, C1, D2
8	Epidemiology methods of surveillance	Methods of surveillance in epidemiology	1	2	A7, D1
9	Screening	Screening	1	2	A8, B5, D1
10	Types of epidemiologic al studies	▪ Observation epidemiology ▪ Experimental epidemiology	5	10	A9, B1, C2, D3
11	Final exam	Final exam	1	2	A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, B2, B3, B4, C1, C2, D1, D3
Number of Weeks /and Units Per Semester			**16**	**32**	

B – Practical Aspect:

Order	Task/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Tb Center visit	3	12	c1, c2, c3, c4
2	Heal centers visits	3	12	c1, c2, c3, c4
3	Hospital visit CSD, Isolation department	3	12	c1, c2, c3, c4
4	Census and statistical office	2	8	c1, c2, c3, c4
	Number of Weeks /and Units Per Semester	**11**	**44**	

V. Teaching strategies of the course
1. Lecture - Discussion 2. Demonstration

3. Brainstorming 4. Case discussions / Seminar

VI. Assignments				
No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Exercise 1: analytical cross-sectional study	A9, B1, C2, D3	**2-4**	**2.5**
2	Exercise 2: cohort study	A9, B1, C2, D3	**8-10**	**2.5**

VII. Schedule of Assessment Tasks for Students During the Semester					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**5%**	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, D1
2	Student assignments	5th and 12th week	**5**	**5%**	A2, A3, A4, B1, B2, C1, C2, C3, C4, D1
3	Mid-term exam	7th or 8th week	**20**	**20%**	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, D1
4	Final-exam	16th -17th week	**70**	**70%**	A6, A7, A8, B4, B5, C6, D1

Clinical Part					
No	Assessments Methods	Week due	Mark	Proportion of Final Assessments	Aligned Course Learning Outcomes
1	Attendance and activities	15th week	**5**	**10%**	C1, C2, C3, C4, C5, C6, C7, C8, C9, D1
2	Student assignments	5th and 12th week	**5**	**10%**	C4, C6, C8, D1
3	Clinical Evaluation/ Semester Work	15th week	**25**	**50%**	C1, C2, C3, C4, C5, D1
4	Final Exam (Written, Oral and	16th -17th week	**15**	**30%**	C6, C7, C8, C9, D1

	Clinical Exam)				
	Number of Weeks /and Units Per Semester		**50**	**100%**	

VII: Learning Resources:

1. Required Textbook(s) (maximum two).

1. St John's Ambulance (2007). First AID. St John's Ambulance Association.
2. Stead, L. G., Stead S. M and Kaufman M. S., (2006). Firstaid for the Emergency Medicine Clerkship. 2nd Ed. McGraw-Hill, New York

2. Essential References.

1. Mahadevan S.V. and Garmel G. (2005). An Introduction to Clinical Emergency Medicine. Cambridge University Press. Cambridge, New York

3. Electronic Materials and Web Sites *etc*.

1. www.GOOGLE.com

IX. Course Policies:

1	Class Attendance: At least 75 % of the course hours should be attended by the student. Otherwise, he/she will not be allowed to attend the final exam
2	Tardy: any student who is late for more than 15 minutes from starting the lecture will not be allowed to attend the lecture and will be considered absent.
3	Exam Attendance/Punctuality: Any student who is late for more than 30 minutes from starting the exam will not be allowed to attend the exam and will be considered absent.
4	Assignments &Projects: Assignments and projects will be assessed individually unless the teacher request for group work
5	Cheating: Cheating by any means will cause the student failure and he/she must re-study the course
6	Plagiarism: Plagiarism by any means will cause the student failure in the course. Other disciplinary procedures will be according to the college rules.

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الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Organic Chemistry**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	1st year /2nd semester			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقر**	Faculty : كلية.....			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description:

This Course is designed to help the student with required knowledge and skills in applied chemistry preparation

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**		**Referenced PILOs** **(مخرجات تعلم البرنامج)**	
F. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Describe basic chemical principles including the structure of the atom, chemical bonding and the periodic table, and also apply the concept of orbital	**A1**	

	hybridization		
a2	Describe the stereoisomer.	**A2**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Able to solve problem depend on given in formation	**B1**	
b2	Different between Pharmacognosy and Phytochemistry	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Prepare different types of drugs from organic compounds	**C1**	
c2	Modify some compounds to get required group of drugs	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Work in teams in researching groups	**D1**	
d2	Analyze and evaluate different data	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Describe the classification of organic molecules	Lectures, Discussion.	Mid term exam
a2	Describe the concept of functional groups and how these groups give rise to characteristic properties	researching in groups for topics course as assignments	Final term exam
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
b1	Describe the concept of functional groups and how these groups give rise to characteristic properties	Large or small group discussion	Participation& semester work
b2	Nomenclature the different groups of compounds	Small Group Projects	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Prepare different types of drugs from organic compounds	Independent Research	Practical exam
c2	Modify some compounds to get required group of drugs	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Work in teams in researching groups		Workbook Assignments
d2	Analyze and evaluate different data		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction to general chemistry**	-Periodic table of elements -Mendeleev's periodic table -Modern periodic table.	1	2	
2	**Types of chemical bonds**	Ionic bonds, covalent bonds, metallic bonds.	2	2	
3	**-Electro distribution in atoms**	Lewis electron and orbital hybridization .	3	2	

4	**Intramolecular active force**	- Vander Waals force -Hydrogen bonding force	4	2	
5	**Classification of organic molecules**	Types of Hydrocarbons (aliphatic and aromatic),	5	2	
6		cyclic and unicyclic ,	6	2	
7		**Midterm exam**	7	2	
8		saturated and unsaturated.	8	2	
9	**Stereoisomer**	stereoisomer's	9	2	
10	**Nomenclature of organic compounds**	Structure , reaction and nomenclature of aliphatic hydrocarbons, Alkanes, alkenes, alkynes	10	2	
11		alcohol, ether, aldehydes, ketones, alky halides, carboxylic acids, amines	11	2	
12		Structure , reaction and nomenclature of aromatic hydrocarbons, Benzene	12	2	
13		phenol, halogen derivatives of benzene.	13	2	
14		Structure , reaction and nomenclature of heterocyclic groups,	14	2	
15		amino acids and carbohydrates	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Identification of Alkane and Alkene , Alkyne	1	2	
2	Identification of acetic acid and formic acid	2	2	

3	Identification of Oxalic acid – Benzoic acid – Salicylic acid	3	2	
4	Differentiation test between Methanol and Ethanol	4	2	
5	Identification of Ethanol and methanol	5	2	
6		6	2	
7	**Midterm exam**	7	2	
8	Differentiation test between Aldehyde & Ketone	8	2	
9	Identification of Aldehyde and Ketone	9	2	
10	Identification of urea	10	2	
11	Identification of Aniline Salts	11	2	
12	Identification of aniline Sulphate and aniline hydrochloride	12	2	
13	Identification of phenol	13	2	
14		14	2	
15	**Final exam**	**15**	2	
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				

10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

6- Participation& semester work
7- Mid term exam
8- Practical exam
9- Quizzes
10- Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**MCQs- Essay questions- True/False Questions- Matching Questions- table complete- Draw**	**a.1.1- a.1.2- a.1.3**	**8,16**	55
2	Group discussion evaluation	**b1.1-b1.2**	**5**	5
3	**Lab exam macro- and microscopically and Lab report**	**c1.1-c1.2**	**8-14**	35
4	**Presentation evaluation**	**d4.1**	**15**	5
Total				**100**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1					
2					
3					
4					
5					
6					
7					
Total			100	100%	

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SYLLABUS
YEAR (2)
SEMESTER (1)

REPUBLIC OF YEMEN
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I. Course Identification and General Information:

1	**Course Title:**	**Pathophysiology**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Field**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**	3\2			
5	**Pre –Requisite (if any):**	None			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

The course is designed to provide emergency medicine students' with knowledge related to mechanism of diseases concerning various body system. It will cover cellular physiology, alterations in cells, tissues injury, hypoperfusion, shock, self-defense mechanisms, variances in immunity, inflammation, stress, genetics and familial diseases.

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**	**Referenced PILOs** **(مخرجات تعلم البرنامج)**
G. Knowledge and Understanding: Upon successful completion of the course, students will be able to:	

a1	Identify the normal characteristics of the cellular environment and the key homeostatic mechanisms that strive to maintain an optimal fluid and electrolyte balance.	**A1**	
a2	Outline pathophysiologic alterations in water, electrolyte balance and their effects on body functions.	**A3**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Analyze critically normal acid–base balance and alterations in acid–base balance.	**B2**	
b2	Explain how changes in immune status and the presence of inflammation can adversely affect body functions.	**B3**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Provide the treatment of patients with particular fluid or electrolyte imbalances.	**C1**	
c2	Describe the management of a patient with an acid–base imbalance	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Appreciate the utilization of research to identify causes genetic and familial disease factors	D1	
d2	Educate the patient about the impact of stress on the body's response to illness or injury.	D3	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Identify the normal characteristics of the cellular environment and the key homeostatic mechanisms that strive to maintain an optimal fluid and electrolyte balance.	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Outline pathophysiologic alterations in water, electrolyte balance and their effects on body functions.	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Analyze critically normal acid–base balance and alterations in acid–base balance.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Explain how changes in immune status and the presence of inflammation can adversely affect body functions.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Provide the treatment of patients with particular fluid or electrolyte imbalances.	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Describe the management of a patient with an acid–base imbalance	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
d1	Appreciate the utilization of research to identify causes genetic and familial disease factors	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Educate the patient about the impact of stress on the body's response to illness or injury.	▪ Classroom discussions, ▪ Problems solving	▪ Presentations ▪ Case Studies ▪ Learning activities

		▪ Case study analysis	

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Cellular Physiology: Basic Cellular Review**	▪ Intracellular and Extracellular Fluid ▪ Aging and the Distribution ▪ of Body Fluids ▪ Water Movement Between ▪ Intracellular Fluid and ▪ Extracellular Fluid ○ Osmosis ○ Diffusion ○ Fluid Replacement Therapy ○ Mediated Transport Mechanisms ▪ Water Movement Between Plasma and Interstitial Fluid ○ Anatomy of the Capillary Network ○ Capillary and Membrane Permeability ▪ Alterations in Water Movement ○ Pathophysiology of Edema ○ Clinical Manifestations of Edema ▪ **Water Balance, Sodium, and Chloride** ○ Water Balance ○ Sodium and Chloride Balance ○ Alterations in Sodium, Chloride, and Water Balance ○ Dehydration ○ Electrolyte Imbalances ○ Overhydration ▪ **Acid–Base Balance**	3	9	a1, b1, c1

		○ Buffer Systems ○ Acid–Base Imbalance ○ Acidosis ○ Alkalosis ○ Mixed Acid–Base Disturbances			
2	**Alterations in Cells and Tissues Injury and Disease**	▪ **Cellular Adaptation** ▪ **Cellular Injury** ○ Hypoxic Injury ○ Free Radical Injury ○ Chemical Injury ○ Infectious Injury ○ Immunologic & Inflammatory Injury ○ Injurious Genetic Factors ○ Injurious Nutritional Imbalances ○ Injurious Physical Agents ▪ **Manifestations of Cellular Injury** ○ Cellular Manifestations ▪ **Cellular Death and Necrosis**	2	6	a1, b1
3	**Hypoperfusion and Shock**	▪ **Pathogenesis** ○ Decreased Cardiac Output ○ Compensatory Mechanisms ▪ **Types of Shock** ▪ **Multiple Organ Dysfunction Syndrome** ○ Pathophysiology ▪ **Impairment of Cellular Metabolism**	2	6	a1,b1
4		**Midterm exam**	1	3	a1,b1
5	**Self-Defense Mechanisms**	▪ **Inflammatory Response** ○ Stages of the Inflammatory Response ○ Mast Cells ○ Local and Systemic Response to Acute Inflammation	2	6	a2,

		○ Responses to Chronic Inflammation ▪ **Immune Response** ○ Induction of the Immune Response ○ Blood Group Antigens ○ Rh Factor			
6	**Variances in Immunity and Inflammation**	▪ **Hypersensitivity: Allergy, Autoimmunity, and Isoimmunity** ○ Mechanisms of Hypersensitivity ▪ **Immunity and Inflammation Deficiencies** ○ Primary Immune Deficiencies ○ Secondary Immune Deficiencies	2	6	a2, b2
7	**Stress and Disease**	▪ **Neuroendocrine Regulation of Stress** ○ Catecholamines ○ Cortisol ✓ Physiologic Effects of Cortisol ▪ **Role of the Immune System** ▪ **Interrelationship of Stress, Coping, and Illness**	1	3	a2, b2
8	**Genetics and Familial Diseases**	▪ **Factors Causing Disease** ○ Genetic Factors ○ Social & Environmental Factors ○ Age and Sex ▪ **Analyzing the Risk of Disease** ○ Disease Rates ○ Risk Factor Analysis ▪ **Combined Effects and Interaction of Risk Factors** ○ Familial Disease Tendency ○ Aging and Age-Related Disorders	2	6	a1

		▪ **Common Familial Diseases and Associated Risk Factors** ○ Common Familial Diseases and Associated Social and Environmental Risk Factors			
		Final exam	**1**	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1:** Alterations in Cells and Tissues Injury and Disease (Cellular Injury)	W5	**5**	a1, b1
2	**Assignment 2:** Self-Defense Mechanisms (Local and Systemic Response to Acute Inflammation)	W11	5	a2, b2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion	Aligned Course Learning

				of Final Assessment	Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1. Banasik, J., & Copstead, L., (2019). Pathophysiology. 6th Ed., Saunders, Missouri
2. Sanders, M., & McKenaa k., Tan, D., Pollak A., and Mejia A., (2019). Sanders' Paramedic Textbook 5th Ed., USA.

2- Essential References:

1. Kumar V., Abbas A., & Aster J., (2018). Robbins Basic Pathology. Elsevier, 10th Ed., Pennsylvania
2. Calvango s., (2013). Emergency Pathophysiology Clinical Applications for Prehospital Care, Teton New Media

3- Electronic Materials and Web Sites etc.:

Websites:

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X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.

5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Analytical chemistry**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	**1st year 1st semester**			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** مكان تدريس المقر	Faculty : كلية.....			
12	**Prepared for:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description:

This course is an introductory to analytical chemistry assesses students for understanding the theoretical and practical knowledge concerning quantitative analysis as well as how to manipulate different techniques in volumetric analysis.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
H. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Explain all principles about fundamental of analysis and methods of analysis	**A1**	

a2	describe the factor effect on analysis	**A2**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	solve problem in lab as well in class	**B1**	
b2		**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	perform different chemical analysis precisely during work	**C1**	
c2	Use all apparatus and instrument that used in analysis	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Work in group team	**D1**	
d2	Participate in group discussion	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Explain all pinciples about fundamental of analysis and methods of analysis	Lectures, Discussion.	Mid term exam
a2	describe the factor effect on analysis	researching in groups for topics course as assignments	Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	solve problem in lab as well in class	Large or small group discussion	Participation& semester work
b2		Small Group Projects	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	perform different chemical analysis precisely during work .	Independent Research	Practical exam
c2	Use all apparatus and instrument that used in analysis	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Work in group team		Workbook Assignments
d2	Participate in group discussion		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction	-fundamental and principle of analysis -A brief over view of analytical chemistry -An over view of the steps in analysis -Strength and concentration of solution	1	2	
2	= Q	-Carbonate, bicarbonate and mixtures sulpher salts	2	2	

		,halides salts			
3		-phosphoric acid and mixture, nitrate , nitrite salts	3	2	
4		**2- Analysis of cations:-** Silver groups, copper	4	2	
5		arsenic group, iron group, zinc group	5	2	
6		alkaline group, magnesium group	6	2	
7		**Midterm exam**	7	2	
8	**Quantitative analysis**	-Gravimetric methods of analysis	8	2	
9		-Volumetric methods of analysis	9	2	
10		Percentage composition (by volume , by weight), morality , normality.	10	2	
11		General consider of titration	11	2	
12		Type of titration 1-Acid - base titration	12	2	
13		2-Precipitation titration 3-Complex titration	13	2	
14		4-Oxidation reduction titration 5-Potentiometric titration	14	2	
15		General overview for types of Spectrophotometry (UV,VIS, IR, NMR),qualitative and quantitative use	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Standardization of HCL & Standardization of NaOH**	1	2	
2	**Determination the strength of Acetic acid**	2	2	
3	**Analysis of Na2 CO3 and Na OH**	3	2	
4	**Determination of chloride by Mohr method**	4	2	
5	**Determination of Iodide by Volhard's method**	5	2	
6	**Determination of chloride by Fajan's method**	6	2	

7	**Determination of chloride by Fajan's method solution using Sodium oxalate**	7	2	
8	**Midterm exam**	8	2	
9	**The determination of iron II in its salts using potassium permanganate**	9	2	
10	**Determination of ferrous in its salts using K2 Cr2O7**	10	2	
11	**Determination of Nitrates & Determination of total Hardness in water**	11	2	
12	**Preparation and standardization of 0.1 N sodium thioulfate.**	12	2	
13	**Iodometric Determination of Cu +2 in its salts**	13	2	
14	**Determination of NH4 CL by residual back titration**	14	2	
15	**Final exam**	15	2	
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

11- Participation& semester work
12- Mid term exam
13- Practical exam

14-	Quizzes
15-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**MCQs- Essay questions- True/False Questions- Matching Questions- table complete- Draw**	**a.1.1- a.1.2- a.1.3**	**8,16**	55
2	Group discussion evaluation	**b1.1-b1.2**	**5**	5
3	**Lab exam macro- and microscopically and Lab report**	**c1.1-c1.2**	**8-14**	35
4	**Presentation evaluation**	**d4.1**	**15**	5
Total				**100**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1					
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

2.

2- Essential References:

2.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	Pharmacognosyl			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	2st year / 1st semester			
5	**Pre –Requisite (if any):**	Botany			
6	**Co –Requisite (if any):**	Pharmacognosy II			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقر**	Faculty : كلية.....			
12	**Prepared for:**	وزارة التعليم الفني والتدريب المهني			
[13	**Date of Approval:**	2021-2022			

II. Course Description:

The aims course is to help students to be able to identify the sources from different part of the plant. The course focuses on methods of cultivation, collection, drying of these drugs, medicinal drugs from leaves, barks and subterranean organ with their active constituents and medicinal uses.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
I. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.1	Explain concepts of cultivation, collection, drying and storage methods and adulteration of medicinal plants.	**A1**	Show the basic concepts, principles and theories of science and drugs.
a1.2	Identify methods for detection and identification of natural drugs macro- and micro-morphologically and chemically.	**A1**	Show the basic concepts, principles and theories of science and drugs.
a.1.3	Describe the biologically active principles and uses in each plant.	**A1**	Show the basic concepts, principles and theories of science and drugs.
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	Identify the unknown plant parts morphologically and microscopically.	**B1**	**.** Specify the best modern technology method for drugs manipulation and development
b1.2	Specify the powdered drug related to leaves, bark and subterranean organ.	**B1**	**.** Specify the best modern technology method for drugs manipulation and development
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1.1	Evaluate experiments for detection of key element and adulteration of leaves, bark and subterranean organ.	**C1**	**.** Perform the best methodology for drug extraction, synthesis, formulation, storage, dispensing and marketing.
c1.2	Prepared slide of an unknown natural drug for identification.	**C1**	**.** Perform the best methodology for drug extraction, synthesis, formulation, storage, dispensing and marketing.
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d4.1	Work with a team or alone to perform reports effectively	**D4**	**.** Work in a team with colleagues and other related individuals

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1.1	- Explain concepts of cultivation, collection, drying and storage methods and adulteration of medicinal plants	Interactive lectures Demonstration Discussion	MCQs- Essay questions- True/False Questions **(EXAM)**
a1.2	-Identify methods for detection and identification of natural drugs macro- and micro-morphologically	Interactive lectures Demonstration Discussion	MCQs- Essay questions- Matching Questions- Draw **(EXAM)**
a1.3	-Describe the biologically active principles and uses in each plant.	Interactive lectures Discussion	MCQs- Essay questions- True/False Questions- Matching Questions **(EXAM)**
	(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1.1	-Interpret the unknown plant parts morphologically and microscopically.	Group discussion Cooperative learning Problem solving	Group discussion evaluation Individual and group reports
b1.2	-Specify the powdered drug is related to leaves, bark and subterranean organ.	Group discussion Cooperative learning Problem solving	Group discussion evaluation Individual and group reports
	(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1.1	-Perform experiments for detection of key element of leaves, bark and subterranean organ.	Practical Lab Demonstration	Lab exam macro- and microscopically and Lab report
c1.2	-Prepare a slide an unknown natural drug for the identification microscopically.	Practical Lab Demonstration	Lab exam and Lab report
	(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
d4.1	-Work with a team or alone to perform reports effectively	Presentation Cooperative learning	Presentation assessment Individual and group work Short report

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	-the scope of pharmacognosy -history the crude drug.	**1**	**2**	a1.1-d1.1-d4.1
2		Collection of crude drug ,cultivation -storage .packaging and adulteration	**2**	**2**	a1.1-d1.1-d4.1
3	**Drugs of Animal origin**	- Honey - Yellow bee wax , white Bee wax - Cod liver oil	**3**	**2**	a1.2- a1.3-b1.1-b1.2--d1.1- d4.1
4	**Drugs of Animal origin**	- Wool fat - Gelatin - Chalk	**4**	**2**	a1.2- a1.3-b1.1- b1.2--d1.1- d4.1
5	Phytochemistry (**Glycosides)**	Introduction and definiation (linkage ,function in plant and activity a-steroidal (cardic glycoside) definition chief drug containing cardiac glycoside (origin, family, active constituents and uses *digitalis purpurea *strophanthus *squill	**5**	**2**	a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1
6	**Anthraquinons**	Introduction and definiation, chief drug containing Anthraquinons (origin, family, active constituents and uses *senna *cascara *frangula *Aloe	6	2	a1.1-d1.1-d4.1
7	**Exam**	**Midterm exam**	7	2	a1.1-d1.1-d4.1
8	**Saponin**	Introduction and definiation, chief drug containing saponin (origin, family, active constituents and uses *natural steroidal saponin *liquorices *senega *Ginseng	8	2	a1.2- a1.3-b1.1-b1.2--d1.1- d4.1

9	**Cyanogenetic glycoside**	Introduction and definiation, chief drug containing cyanogenetic glycoside (origin, family, active constituents and uses *cherry laurel *bitter almond *linseed	9	2	a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1
10	**Glucosinolate**	Introduction and definiation, chief drug containing lucosinolate (origin, family, active constituents and uses *mustard seed *black m.s *white m.s	10	2	a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1
11	**Flavonoids**	Introduction and definiation, chief drug containing flavonoids (origin, family, active constituents and uses *ruta *citroflavonoids	11	2	a1.1-d1.1- d4.1
12	**Volatile oil**	Introduction and definiation *camphor *turpentine *funnel *anise	12	2	a1.1-d1.1- d4.1
13	**Volatile oil**	*thyme *eucalyptus *peppermint clove *ammi majus *ammi visnaga	13	2	a1.2- a1.3- b1.1-b1.2-- d1.1- d4.1
14	**Tannins**	Introduction and definiation	14	2	a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1
15	**Tannins**	**Tannins Galls ,Hammelis bark and leaves**	15	2	a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1
16	**Exam**	**Final exam**	16	2	a1.1-d1.1- d4.1
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Microscopic and identification of key element in simple powder	**1**	**2**	c1.1-c1.2- d1.1- d4.1
2	Microscopic and identification of key element of cinnamon	**2**	**2**	c1.1-c1.2- d1.1- d4.1
3	Microscopic and identification of key element of thymus	**3**	**2**	c1.1-c1.2- d1.1- d4.1

4	Microscopic and identification of key element of peppermints	**4**	**2**	**c1.1-c1.2- d1.1-d4.1**
5	Microscopic and identification of key element of clove	**5**	**2**	**c1.1-c1.2- d1.1-d4.1**
6	Microscopic and identification of key element of chamomile	**6**	**2**	**c1.1-c1.2- d1.1-d4.1**
7	Microscopic and identification of key element of senna	**7**	**2**	**c1.1-c1.2- d1.1-d4.1**
8	**Midterm exam**	**8**	**2**	**c1.1-c1.2- d1.1-d4.1**
9	Microscopic and identification of key element of henna	**9**	**2**	**c1.1-c1.2- d1.1-d4.1**
10	Microscopic and identification of key element of fenugreek seed	**10**	**2**	**c1.1-c1.2- d1.1-d4.1**
11	Microscopic and identification of key element of line seed	**11**	**2**	**c1.1-c1.2- d1.1-d4.1**
12	Microscopic and identification of key element of ginger	**12**	**2**	**c1.1-c1.2- d1.1-d4.1**
13	Microscopic and identification of key element liqurace	**13**	**2**	**c1.1-c1.2- d1.1-d4.1**
14	Slide review	**14**	**2**	**c1.1-c1.2- d1.1-d4.1**
15	**Final exam**	**15**	**2**	**c1.1-c1.2- d1.1-d4.1**
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
2				
3				
4				
5				
6				
7				

8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

16- Participation& semester work
17- Mid term exam
18- Practical exam
19- Quizzes
20- Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	MCQs- Essay questions- True/False Questions- Matching Questions- table complete- Draw	**a.1.1- a.1.2- a.1.3**	8,16	55
2	Group discussion evaluation	**b1.1-b1.2**	5	5
3	Lab exam macro- and microscopically and Lab report	**c1.1-c1.2**	8-14	35
	Presentation evaluation	**d4.1**	15	5
Total				**100**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quiz, Assignment, oral exam	Weekly	10	10%	a.1.1- a.1.2- a.1.3- b.1.1-b.1.2- d.4.2
2	Practical reports	Weekly	5	5%	c.1.1-c.1.2
3	Mid exam Theory	8	15	15%	a.1.1- a.1.2-b.1.1-b.1.2
4	Mid exam Practical	8	10	10%	c.1.1-c.1.2
5	Final exam theory	16	40	40%	a.1.1- a.1.2-b.1.1-b.1.2
6	Final exam practical	15	20	20%	c.1.1-c.1.2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1. Barnes, J., Anderson, L. A. and Phillipson, J. D.: "Herbal medicines" Pharmaceutical Press, 3rd ed., 2007.

2J. Bruneton: "Pharmacognosy, Phytochemistry, Medicinal Plants" Lavoisier Publishing, Intercept 2nd ed., 2008.

2- Essential References:

3. Trease, G.E. & Evans, W.C.; Pharmacognosy, W.B. Saunders Publishers, Ltd,16th ed., 2006.

3- Electronic Materials and Web Sites etc.:

- Vascular plant image library

http://botany.csdl.tamu.edu/FLORA/gallery.htm

- A modern herbal

1. http://www.botanical .com
2. http://www.pubmed.com

- http://www.herbmed.com

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:**

	No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Section and Collage Administration.

I. Course Identification and General Information:

1	**Course Title:**	**pharmacology l**			
2	**Course Code & Number:**				
3	**Credit Hours:2hr**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2hr	2hr	---	---
4	**Study Level/ Semester at which this Course is offered:**	1st year / 2nd semester			
5	**Pre –Requisite (if any):**	No found			
6	**Co –Requisite (if any):**	No found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:**	كلية الآفاق للعلوم الطبية والتقنية Class			
12	**Prepared by:**	كلية الآفاق للعلوم الطبية والتقنية			
13	**Date of Approval:**	2021-2022			

II. Course Description:

Providing the student with the knowledge and understanding about the

1. Pharmacokinetic of drugs (absorption, distribution, metabolism and excretion).
2. Pharmacodynamic of drugs (mechanism of drug action & their biological effects on different body organs and drug-protein binding) and dosage form of drugs (advantages & disadvantages).
3. Use & their side effects (drug toxicity, abuse, and their misuse).
4. Drugs effect on autonomic nervous system

- Sympathomimetic agents.
- Sympatholytic agents.
- Para sympathomimetic agents.
- Para sympatholytic agents.
- Drugs acting on ganglia.

5.Drugs used in glaucoma

- Mydriatics.
- Miotics.

- Miscellaneous ophthalmic drugs.

6.Cardiovascular drugs

- Antihypertensive agents.
- Anti-angina agents.
- Drugs used in treatment of heart failure.
- Anti-arrhythmic agents & Drugs for shock.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
J. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define the drugs affecting autonomic nervous system , eye, cardiovascular system	**A1**	Recognize the side effects of various drugs .
a2	Identify action and indication of the drugs	**A2**	Explain Mechanism of action of drugs affecting autonomic nervous system. eye, cardiovascular system
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	list precaution to be taken for each drug.	**B1**	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease
b2	Deal with patient when side effect occurred.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Perform some experiments in pharmacology.	**C1**	
c2	The ability to interact with experimental animals	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Present scientific topics in seminar.	**D1**	
d2	work as team.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Define the drugs affecting autonomic nervous system , eye, cardiovascular system	Lectures Group discussion.	Quiz Mid-term exam Final term exam

a2	Identify action and indication of the drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Recognize the side effects of various drugs .	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Explain Mechanism of action of drugs affecting autonomic nervous system. eye, cardiovascular system	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	list precaution to be taken for each drug.	Lectures Group discussion.	Written test Oral exam
b2	Deal with patient when side effect occurred.	Lectures Group discussion.	Written test Oral exam
	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease	Lectures Group discussion.	Written test Oral exam
	(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Perform some experiments in pharmacology.	Practical	Practical exam
c2	The ability to interact with experimental animals	Practical	Practical exam
	(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
d1	Present scientific topics in seminar.	Seminar Group discussion.	Mid-term exam Final term exam
d2	work as team.	Seminar Group discussion.	Mid-term exam Final term exam

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	• General pharmacology Definitions. • Drug source & classification.	1	2	
2	**Pharmacokinetic**	• Pharmacokinetic: Absorption, Distribution, biotransformation & Excretion. • Routes of drugs administration.	2	2	
3	**Pharmacodynamics**	- Pharmacodynamics: - Theory of receptor. - drug-protein binding. - Adverse drug effects. - Drug-drug interaction.	3	2	
4	**Autonomic Nervous System**	• Introduction to A.N.S.	4	2	
5		Sympathomimetic agents.	5	2	
6		Sympatholytic agents.	6	2	
7		• Parasympathomimetic agents.	7	2	
8		**Midterm exam**	8	2	
9		• Parasympatholytic agents. • Drugs acting on ganglia	9	2	
10	**Pharmacology of Eye**	• Drugs used in glaucoma • Mydriatics.	10	2	
11		• Miotics. • Miscellaneous ophthalmic drugs.	11	2	
12	**Cardiovascular System (C.V.S)**	Antihypertensive agents. • Follow up: Antihypertensive agents& Diuretics.	12	2	

13		• Anti-anginal agents.	13	2	
14		• Drugs used in treatment of heart failure.	14	2	
15		• Anti-arrhythmic agents. • Drugs for shock	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
7				
8	**Midterm exam**			
9				
10				
11				
12				
13				

14				
15	**Final exam**			
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

1- lecture.
2- Discussion in groups.
3- Researching in groups for different topics as assignments.
4-Seminar Group discussion.

VI. Assessment Methods of the Course:

1- Participation& semester work	to assess intellectual skills
2- Mid-term exam	to assess the knowledge & understanding
3-Final term exam	to assess the knowledge & understanding
5- Quizzes	to assess the knowledge & understanding
6- Workbook Assignments	to assess the general and transferable skills.

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)

1				
2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Semester work		20	20%	
2	Mid-Term Examination		20	20%	
3	Final-term Examination		60	60%	
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

3.

2- Essential References:

4.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:**

	A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

REPUBLIC OF YEMEN
Ministry of Technical Education
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Higher Council of Community Colleges
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الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Pharmaceutical 1**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	-	2hr
4	**Study Level/ Semester at which this Course is offered:**	1st year / 2st semester			
5	**Pre –Requisite (if any):**	No found			
6	**Co –Requisite (if any):**	No found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقرر**	Faculty : كلية			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
[13	**Date of Approval:**	2021-2022			

II. Course Description: وصف المساق

This course is designed to introduce the students to some basic terminology related to pharmaceutical calculations, to teach students how to read and interpret prescriptions, and to learn the different methods for dosage calculation and alteration of product strength. Some basic physicochemical principles such as solubility, as well as an introduction to compounding will also be covered, and to provide student with detailed knowledge and understanding concerning preraation and controlling of various pharmaceutical dosage form like solution ,suspension and emulsion .

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**		**Referenced PILOs** **(مخرجات تعلم البرنامج)**	
K. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.1	Students will: Understanding calculations regarding (weight/weight, weight/volume,	**A1**	**A1**

	volume/weight and volume/volume) and dilutions of stock solutions		
a1.2	Understand the format and components of a typical prescription and a medication order.	**A2**	**A2**
a1.3	Learn how to calculate doses based on age, body weight, and body surface area.	**A3**	**A3**
a1.4	Learn how to reduce and enlarge formulas for pharmaceutical preparations.	**A4**	**A4**
a1.5	learn the methods of preparation of pharmaceutical solution ,suspension and emulsion	**A5**	**A5**
a1.6	Learn how to determine the critical solution temperature of a binary system of partially miscible liquids.	**A6**	**A6**
a1.7	Learn the importance of solutions as a pharmaceutical dosage form and their method of preparation**.**	**A7**	**A7**
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	Students will be able to: Differentiate between the expressions percent weight-in-volume, percent volume-in -volume, percent weight-in-weight, and ratio strength	**B1**	**B1**
b1.2	Interpret correctly the standard abbreviations and symbols used on prescriptions and medication orders.	**B2**	**B2**
b1.3	Differentiate between the various kinds of doses.	**B3**	**B3**
b1.4	Perform calculations for altering product strength by dilution, concentration, or fortification, and for the preparation and use of stock solutions	**B4**	**B4**
b1.5	Differentiate between complete and partial miscibility and immiscibility	**B5**	**B5**
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
C1.1	Students will be able to: Calculate the percentage strength and ratio strength of a pharmaceutical preparation**.**	**C1**	**C1**
C1.2	Apply percent strength and ratio strength to calculate the quantity of an ingredient to use in compounding a pharmaceutical preparation**.**	**C2**	**C2**
C1.3	Apply the allegation method in problem-solving**.**	**C3**	**C3**

C1.4	Perform conversions of measurement within the metric system and between the metric, household and apothecary systems.	**C4**	**C4**
C1.5	Solve problems involving the following: ratio & proportion, fractions and conversion of ratios to percentages	**C5**	**C5**
C1.6	Perform dosage calculations including the following: calculating number of doses, dispensing quantities, ingredient quantities, paediatric formulas body surface area and day supply calculations**.**	**C6**	**C6**
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d 4.1	Students will acquire: Skills in scientific research and efficiently use to modern technology in getting information and employee them.	**D1**	**D1**
d 4.2	Skills in teamwork and active, cooperative member and able in solving problem and work under stress and have communication skill.	**D2**	**D2**
d 4.3	Interact with their Pharmacy group in demonstrating and judging safe Pharmaceutical practices.	**D3**	**D3**
d 4.4	Exhibit professionalism and safety practices in all classes and uphold the rules of the campus, medical Pharmacy and instructor's directions.	**D4**	**D4**
d 4.5	Create timely work habits, examine personal lifestyle, ethics, integrity, values and priorities and appreciate the value of research skills for making informed choices	**D5**	**D5**

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	A1, A2,A3, A4, A5, A6, A7	▪ Classroom lecture ▪ Problem based learning&case studies	▪ Quizzes and home assignments ▪ Mid-term exam ▪ Final-term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

b1	B1, B2, B3, B4, B5	▪ Tutorials ▪ Reading assignment ▪ Self-learning during laboratory session ▪ Classroom discussions ▪ Web based search	▪ Quizzes and home assignments ▪ Mid-term exam ▪ Final-term exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	C1, C2, C3, C4, C5, C6	▪ Supervised practice in Lab ▪ Self-practice ▪ Lab Session ▪ Encourage active participation and effective expression of ideas during class lecture	▪ **Objective Structured Practical Examination (OSPE)** ▪ **Lab Mid-term exam** ▪ **Lab Final-term exam**

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d 4	D1, D2, D3, D4, D5	▪ Class room discussions ▪ Web based search	▪ Assignments

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Basic principles of compound and dispensing**	-definition of dosage forms - types of dosage forms -routes of administration for systemic effects -route of administration for local effects	**1**	**2**	**a1.1-d1.1-d4.1**
2		International Systems of Units; Metric system, common systems, conversion	**2**	**2**	**a1.1-d1.1-d4.1**

3		Percentage, Ratio Strength Other Expressions of Concentration	**3**	**2**	**a1.2- a1.3- b1.1-b1.2-- d1.1- d4.1**
4		-Romman Number Percentage, Ratio Strength Other Expressions of Concentration. (continued)	**4**	**2**	**a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1**
5	**prescription**	Interpretation of prescription medication orders; Definition, components of typical Rx, abbreviations and symbols commonly used in Rx.	**5**	**2**	**a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1**
6	▪ **Formulation of dispensed products**	-Study of physical properties of drug and its effect on formulation *Colour and flavor *Incompatibility *Physical *Chemical	**6**	**2**	**a1.1-d1.1- d4.1**
7		▪ Storage and stability of dispensed products ▪ Containers used for pharmaceutical products Glass, plastics, metals -Interactions between product and packaging	**7**	**2**	**a1.1-d1.1- d4.1**
8	**Med. Term exam**		**8**	**2**	**a1.2- a1.3- b1.1-b1.2-- d1.1- d4.1**
9	**solution**	• Introduction • Formulation ○ Vehicles *Types of water *Solubility *Other vehicles for solution *Other additives *Factors affecting solubility *Stability of solution *Classification of pharmaceutical *solution - Solution for oral use -Elixirs -Tinctures -Mixtures	**9**	**2**	**a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1**
10	**solution**	*Solution instilled into body cavities -mouth washes and gargles -Nasal drops and sprays -Ear drops	**10**	**2**	**a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1**

		-Enemas -Douches			
11	**solution**	*Solutions for external use -Lotions -Liniments -Paints -Collodions -Antiseptics	**11**	**2**	**a1.1-d1.1-d4.1**

12	**suspensions**	• Advantages and disadvantages
		• Pharmaceutical application of suspension
		• Types of suspensions
		  ○ For oral use
		  ○ For external use
		• Formulation of suspension
		Difference between Flocculation, deflocculation
			12	**2**	**a1.1-d1.1-d4.1**

13	**suspensions**	• Factors affecting sedimentation rate of suspension. • Formulation of various types of suspensions. • suspension. • Formulation of various types of suspensions. • flocculating agents • Viscosity modifiers • Formulation additives Stability testing of suspension	**13**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**
14	**Emulsion**	• Emulsion types • Emulsion uses • Identification of emulsion type • Emulsion formulation *Choice of emulsion type, and oil phase *Emulsion consistency *Choice of emulsifying agent	**14**	**2**	**a1.2- a1.3-b1.1- b1.2--d1.1- d4.1**
15	**Emulsion**	• Preparation of emulsion • Classification of emulsifying agents • Stability of emulsion	**15**	**2**	**a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1**
16		**Final exam**	**16**	**2**	**a1.1-d1.1-d4.1**
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Glass wear ,Weights and measures	**1**	**2**	c1.1-c1.2- d1.1-d4.1
2	Calculation for compounding and dispensing	**2**	**2**	c1.1-c1.2- d1.1-d4.1
3	Containers and closures	**3**	**2**	c1.1-c1.2- d1.1-d4.1
4	Labeling	**4**	**2**	c1.1-c1.2- d1.1-d4.1
5	Simple syrup	**5**	**2**	c1.1-c1.2- d1.1-d4.1
6	Lugol's solution.	**6**	**2**	c1.1-c1.2- d1.1-d4.1
7	Potassium permanganate 0.2%	**7**	**2**	c1.1-c1.2- d1.1-d4.1
8	Exam	**8**	**2**	c1.1-c1.2- d1.1-d4.1
9	Sodium bicarbonate Ear drops.	**9**	**2**	c1.1-c1.2- d1.1-d4.1
10	Preparation of simple solution (aromatics water) by solution method	**10**	**2**	c1.1-c1.2- d1.1-d4.1
11	Castor oil emulsion.	**11**	**2**	c1.1-c1.2- d1.1-d4.1
12	Liquid paraffin emulsion.	**12**	**2**	c1.1-c1.2- d1.1-d4.1
13	Starch mucilage.	**13**	**2**	c1.1-c1.2- d1.1-d4.1
14	Calamine lotion	**14**	**2**	c1.1-c1.2- d1.1-d4.1
15	**Final exam**	**15**	**2**	c1.1-c1.2- d1.1-d4.1
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Active lecture
Problem based learning &case studies
Tutorials reading assignment

Self-learning during laboratory session
Classroom discussions
Web based search
Supervised practice in Lab
Self-practice

VI. Assessment Methods of the Course:

21-	Participation& semester work
22-	Mid term exam
23-	Practical exam
24-	Quizzes
25-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	One home assignment after each lecture, lab exam ,lab report	1-15	60	a2.1,a3.1,a3.2,a3.3,a3.4
2	Group assignment	3, 4, 8, 12	40	b2.1,b2.2,b2.3
Total			**100**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	1-15	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,b2.1,b2.2,b2.3, c3.1c,3.2,c3.3,d3.1,d1.1,d2.1
2	Midterm Exam	8	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,d3.1,d1.1,d2.1
3	Lab Midterm Exam	8	10	10%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3
4	Lab Final Exam	15	20	20%	c3.1c,3.2,c3.3
5	Final Exam	16	30	30%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3
6	Assignments	1-15	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,b2.1,b2.2,b2.3, c3.1c,3.2,c3.3,d3.1,d1.1,d2.1
7	Midterm Exam	8	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,d3.1,d1.1,d2.1
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1-Pharmaceutical calculations, by: M. J. Stocklosa and H. C. Ansel, 13th edition,2010.
2-Pharmaceutical Calculations, H.C. Ansel, 13th Ed., Lippincott Williams&Wilkins, 2010.

2- Essential References:

1-Martin's Physical Pharmacy and Pharmaceutical Sciences, P.J. Sinko, 6th Ed,.Lippincott Williams & Wilkins, 2011.
2-Pharmaceutical Practice, A.J. Winfield and R.M.E. Richards, 3rd Ed,.Churchill Livingstone, 2004.

3- Electronic Materials and Web Sites etc.:

- **http://www.histologyguide.org/index.html**

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Industrial Pharmacy**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2hr	2hr		
4	**Study Level/ Semester at which this Course is offered:**	2st year / 3rd semester			
5	**Pre –Requisite (if any):**	Pharmaceutics III			
6	**Co –Requisite (if any):**	NO found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقرر**	Faculty : كلية.....			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description: وصف المساق

This course describes how the term has been interpreted for the purpose of this course and how pharmaceutics fits into the overall scheme of pharmaceutical science and the process of designing and manufacturing a new medicine. An understanding of the concept and design of various pharmaceutical dosage forms.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
L. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.1	Students will: Understand the Preformulation is the stage in drug and dosage form development before formulation proper and preformulation aims to optimize the process of turning a drug candidate into a drug product	**A1**	**A1**
a1.2	Understand advantages, disadvantages and mechanism of action and explain and discuss the use of different equipment to achieve certain operational of pharmaceutical industry.	**A2**	**A2**
a1.3	Understand physicochemical properties of the molecule affect how a material will process pharmaceutically, its stability, its interaction with excipients, how it will transfer to solution and, ultimately, will determine its bioavailability.	**A3**	**A3**
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	**Students will be:** Able to design and mechanism of action of the instruments included in the unite operation in pharmaceutical practice.	**B1**	**B1**
b1.2	Able to point out the principles of each unite operation in pharmaceutical processes. and able to define the physical principle of each unite operation in industrial pharmacy.	**B2**	**B2**
b1.3	Able to predict the relationship between the equipment design and product characteristics	**B3**	**B3**
b1.4	Able to made on the likely ease of formulation of each drug candidate, indicate the most appropriate dosage form and highlight any potential issues with process ability.	**B4**	**B4**
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Nil	**C1**	
c2		**C2**	

D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1.1	**Students will be:** Skills in scientific research and efficiently use to modern technology in getting information and employee them.	**D1**	**D1**
d1.2	Work in team and be active, cooperative member and able in solving problem and work under stress and have communication skill.	**D2**	**D2**
d1.3	Writing reports representing data clearly	**D3**	**D3**

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Understand the Preformulation is the stage in drug and dosage form development before formulation proper and preformulation aims to optimize the process of turning a drug candidate into a drug product	▪ Lectures ▪ Discussions ▪ Solve exercises	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
b1	**Students will be:** Able to design and mechanism of action of the instruments included in the unite operation in pharmaceutical practice.	▪ Lectures ▪ Discussions ▪ Solve exercises Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams Evaluation
b2	Able to point out the principles of each unite operation in pharmaceutical processes. and able to define the physical principle of each unite operation in industrial pharmacy.	▪ Lectures ▪ Discussions ▪ Solve exercises Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams Evaluation
	Able to predict the relationship between the equipment design and product characteristics	▪ Lectures ▪ Discussions ▪ Solve exercises Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams Evaluation

	Able to made on the likely ease of formulation of each drug candidate, indicate the most appropriate dosage form and highlight any potential issues with process ability.	▪ Lectures ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams Evaluation

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
	Nil		

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	**Students will be:** Skills in scientific research and efficiently use to modern technology in getting information and employee them.	*Assignment (individually and group) *Exercises *Focus Group	*Presentations *Evaluation
d2	Work in team and be active, cooperative member and able in solving problem and work under stress and have communication skill.	*Assignment (individually and group) *Exercises .*Focus Group	*Presentations *Evaluation
	Writing reports representing data clearly	*Assignment (individually and group) *Exercises *Focus Group	*Presentations *Evaluation

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Preformulation**	Organoleptic properties, Particle size,Crystalinity and polymorphism, Solubility analysis and Dissolution	**1**	**2**	**a1.1- b1.1- d1.1- d4.1**
2	**Preformulation**	pKa determinations, pH solubility profile, Stability analysis(solution stability and solid state stability)	**2**	**2**	**a1.1- b1.1- d1.1- d4.1**

3	**Particle Size Analysis**	Equivalent diameters and particle size distribution. particle size analysis methods and selection of particle size analysis method	**3**	**2**	**a1.2- b1.1- d1.1- d4.1**
4	**Milling**	Mechanisms involved, methods of size reduction in small and large scales, equipment classified according to the mechanism of action	**4**	**2**	**a1.2- b1.1- d1.1- d4.1**
5	Mixing	Fluid mixing(mechanisms, and equipment)	**5**	**2**	**a1.2- b1.1- d1.1- d4.1**
6	**Mixing:**	Solid mixing (factors involved, and equipment) Semisolid mixing	**6**	**2**	**a1.2- b1.1- d1.1- d4.1**
7		**Midterm exam**	**7**	**2**	
8	**Granulation**	Dry Granulation (materials, methods, equipment),	**8**	**2**	**a1.1- a1.2- b1.1- d1.1- d4.1**
9	**Granulation**:	Wet Granulation (materials, methods, equipment)	**9**	**2**	**a1.3- b1.2 d1.1- d4.1**
10	Drying:	Definition and purposes, mechanisms of drying,classification of solids based on drying behavior	**10**	**2**	**a1.3- b1.2 d1.1- d4.1**
11	**Drying:**	▪ Drying Equipment	**11**	**2**	**a1.3- b1.2 d1.1- d4.1**
12	**Drying:**	▪ Spray drying, Freeze drying	**12**	**2**	**a1.3- b1.2 d1.1- d4.1**
13	**Clarification and Filtration:**	▪ Factors affecting filtration, filter media and filter aids	**13**	**2**	**a1.3- b1.2 d1.1- d4.1**
14	**Clarification and Filtration**	▪ Filtration equipment	**14**	**2**	**a1.3- b1.2 d1.1- d4.1**
15	**Review**	**Review**	**15**	**2**	
16	**Exam**	**Final exam**	**16**	**2**	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Nil			
2				
3				
4				
5				
6				
7				

8	**Midterm exam**			
9				
10				
11				
12				
13				
14				
15	**Final exam**			
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Nil			
2				
3				
4				
5				
6				

7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

(a) Lectures
(b) Class discussion
(c) Exercises solving
(d) Collaborative learning / pair work / group work
(e) Assignments

VI. Assessment Methods of the Course:

26- Participation& semester work
27- Mid term exam
28- Practical exam
29- Quizzes

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	One home assignment after each lecture	1-16	60	a2.1,a3.1,a3.2,a3.3,a3.4
2	Group assignment	7, 14	40	b2.1,b2.2,b2.3
Total			**100**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes

1	Assignments	1-15	100	40%	a2.1,a3.1,a3.2,a3.3,a3.4,b2.1,b2.2,b2.3, ,d3.1,d1.1,d2.1
2	Midterm Exam	8	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3
3	Final Exam	16	40	40%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1- Alton's Pharmaceutics; The Design and Manufacture of Medicines, By; M. E. Aulton. Fifth edition. 2016.

2-The Theory and Practice of Industrial Pharmacy, Edited by. LEON LACHMAN, HERBERT A. LIEBERMAN, and JOSEPH L. KANIG. Lea & Febiger, 4thEdition.2013.

2- Essential References:

1-United States Pharmacopeia, 2016.

2- British Pharmacopeia, 2016.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:**

	Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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الجهاز التنفيذي

Course Information	
Course Title	**Principles of First Aids**
Course Code and Number	
Credit Hours	Theoretical- 2 hours
	Practical - 1 hours
Study level and semester	**First year/ First Semester**
Program in which the course is offered:	Diploma of Emergency Medicine
Course Language	English
Pre –requisite (if any):	Non
Co –requisite (if any):	Non

Course Description

This course is designed to provide students with the knowledge and skills required to introduce the first care the critically ill patient.

It focuses on identification and implementation of the rapid and accurate assessment and providing of the to assist the critically ill patients with the accessible resources.

Course Objectives:

- *Define the rules and responsibilities of the first aids provider.*
- *Identify the most common condition that needs to the first aids.*
- *Describe the accurate assessment and intervention to introduce the first help with the accessible resources.*

Course Contents:

Hours	**Content**
2	✓ Definition of the first aid ✓ Principles of first aid management ✓ Purpose of first aid ✓ First aid providers rules and responsibilities ✓ First aid materials
4	✓ Wounds ✓ Haemorrhage,
4	✓ Fracture, dislocations, muscle injuries
4	✓ Splinting ✓ Dressings ✓ Principles of bandaging
2	✓ Occupational exposures in the emergency department
4	✓ Burns (Thermal, Chemical, and Other) ✓ Sunburn

	✓ Electrical Injury ✓ Scalds, ✓ Foreign bodies in the skin, eye, ear, nose, throat, stomach
4	✓ First aids to venomous bites and stings: □ Snake bite □ Scorpion stings □ Spider bite □ Bee and wasp stings □ Dog bite □ Cat bite □ Human bite
2	✓ First Aid of Seizures & Epilepsy

Teaching & Learning Methods
✓ -Lectures ✓ - Discussion ✓ Presentations ✓ Library Search

Learning Assessment			
No	Assessment Task	Mark	Weigh
1	Assignment/Quizzes/Homework	20%	
2	Mid- term exam	20%	
3	Final Exam	60%	
	Total	100%	

Learning Resources

- ✓ Barbara K. Blok, Dickson S. Cheung, and Timothy F. Platts-Mills First Aid for the® Emergency Medicine Boards Copyright © 2016 by McGraw-Hill Education.
- ✓ International first aid and resuscitation guidelines © International Federation of Red Cross and Red Crescent Societies, Geneva, 2016

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SYLLABUS
YEAR (2)
SEMESTER (2)

REPUBLIC OF YEMEN
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الجمهورية اليمنية
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I. Course Identification and General Information:

1	**Course Title:**	**Epidemiology**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Credit hours**
			Lecture	**Exercise**	
		1	-	2	2
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

This course focuses on the pattern of occurrence of communicable and non-communicable disease of significance importance in the community and its effect on national health status. Also the course will be introduced the essential epidemiological terminologies and control and prevention methods to communicable and non-communicable disease.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)	**Referenced PILOs** (مخرجات تعلم البرنامج)
M. Knowledge and Understanding: Upon successful completion of the course, students will be able to:	

a1	Identify the concepts of disease occurrence, chain of infection, levels of prevention and methods of control of communicable diseases		
a2	Recognize methods of surveillance, screening and types of studies in epidemiology		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Analyze determinant of health and principles of preventive and control of common health problems		
b2	Compare between descriptive and experimental epidemiological studies and measures of risk		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Implement epidemiological studies based on observation		
c2	Apply infection control measures to control of communicable diseases		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Employ effective communication and accurate documentation while providing methods of control of communicable diseases		
d2	Use an internet and computer while studying observational and experimental studies		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Identify the concepts of disease occurrence, chain of infection, levels of prevention and methods of control of communicable diseases	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Recognize methods of surveillance, screening and types of studies in epidemiology	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
b1	Analyze determinant of health and principles of preventive and control of common health problems	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Compare between descriptive and experimental epidemiological studies and measures of risk	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
c1	Implement epidemiological studies based on observation	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Apply infection control measures to control of communicable diseases	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
d1	Employ effective communication and accurate documentation while providing methods of control of communicable diseases	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Use an internet and computer while studying observational and experimental studies	▪ Classroom discussions, ▪ Problems solving	▪ Presentations ▪ Case Studies ▪ Learning activities

		▪ Case study analysis	

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction to epidemiology	▪ The historical context. ▪ Definition of epidemiology ▪ Objectives of epidemiology. ▪ Uses of epidemiology	1	**2**	a1, b1, d1
2	Concepts of Disease Occurrence	▪ Epidemiologic Triangle (Triad) ▪ Epidemiologic Concepts	1	**2**	a1, b1, d1
3	Chain of Infection	▪ Reservoir ▪ Portal of exit ▪ Modes of transmission ▪ Portal of entry ▪ Host	1	2	a1, b1, c1, d1
4	Levels of prevention	▪ Definition of prevention ▪ Levels of prevention: - Primary prevention - Secondary prevention - Tertiary prevention	1	2	a1, b1, c1, d1
5	Methods of control of communicable diseases	▪ Main methods of control ✓ Elimination of Reservoir of Infection ✓ Interruption of Transmission ✓ Susceptible Host Protection ▪ General methods for control of communicable diseases ✓ Preventive Measures ✓ Control of Patient, Contact and Environment ✓ Epidemic Measures ✓ International Measures ▪ Nursing function in communicable diseases control	1	2	a1, b1, c1, d1
6	Measures of risk	▪ Frequency Measures ▪ Morbidity Frequency Measure ▪ Mortality Frequency Measures ▪ Birth Measures ▪ Measures of Association	1	2	a1, b1, d1

7		Midterm exam	1	2	a1, b1, c1, d1
8	Epidemiology methods of surveillance	Methods of surveillance in epidemiology	1	2	a2, d2
9	Screening	Screening	1	2	a2, d2
10	Types of epidemiological studies	▪ Observation epidemiology ▪ Experimental epidemiology	5	10	a2, c2, d2
11		**Final exam**	1	2	a2, c2, d2
Number of Weeks /and Units Per Semester					

B. Case Studies and Practical Aspect:

No.	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Tb Center visit	3	12	c1, c2
2	Heal centers visits	3	12	c1, c2
3	Hospital visit CSD, Isolation department	3	12	c1, c2
4	Census and statistical office	2	8	c1, c2
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester				

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1: analytical cross-sectional study**	W5	**5**	a1, c1
2	**Assignment 2: cohort study**	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

4.

2- Essential References:

1.
3- Electronic Materials and Web Sites etc.:
Websites: ▪

X. Course Policies :(2007) Based on the Uniform Students' By law) تترك كما هي	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

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I. Course Identification and General Information:

1	**Course Title:**	**Health Administration**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs** (مخرجات تعلم البرنامج)	
N. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Explains the principles, functions, elements and process of planning, organization, budget and staffing		

a2	Identify principles of controlling and conflict management		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Discuss advantages and disadvantages of planning		
b2	Differentiate between records and reports, negligence & malpractice		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Apply the role of the manager as a controller, decision maker, supervisor and director		
c2	Practices appropriate leadership styles		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Demonstrates the legal and ethical issues in managerial role		
d2	Utilize the legal and ethical principles in managerial role		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Explains the principles, functions, elements and process of planning, organization, budget and staffing	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Identify principles of controlling and conflict management	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

b1	Discuss advantages and disadvantages of planning	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Differentiate between records and reports, negligence & malpractice	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Apply the role of the manager as a controller, decision maker, supervisor and director	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Practices appropriate leadership styles	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Demonstrates the legal and ethical issues in managerial role	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Utilize the legal and ethical principles in managerial role	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction to administration & management	▪ Definition, concepts and theories of administration and management ▪ Functions of administration ▪ Principles of administration ▪ Role of nurses as a manager	1	1	a1, b1, c1, d1
2	Planning	▪ Definition of planning ▪ Aims, ▪ Principles of planning ▪ Advantages and disadvantages of planning ▪ Methods of planning ▪ Steps of planning ▪ Types of planning	1	1	a1, b1, c1, d1
3	Organization	▪ Definition, aims principles and techniques ▪ Preparation of organizational chart of a hospital ward primary health center, sub center ▪ Policies of the hospital & departments	1	1	a1, b1, c1, d1
4	Budget	▪ Concept of budget ▪ Budget: integration role and function ▪ Purposes of budgeting ▪ Features of budgeting ▪ Importance of budgeting ▪ Principles of budgeting ▪ Classification of budgeting ▪ Budgeting process	1	1	a1, d1
5	Staffing	▪ Meaning of staffing ▪ Roles and functions of manager in staffing ▪ Job description, job specification, Job analysis, and job satisfaction. ▪ Staff development and staff welfare. ▪ Leadership styles, Democratic leadership.	1	1	a1, d1

6		Midterm exam	1	1	a1, b1, c1, d1
7	Directing	▪ Nature of direction ▪ Motivation ▪ Leadership o Leadership styles: theories o Leadership skills o Leadership activities ▪ Communication: o Level of communication o Types of communication o Making assignment & factors influence of communication ▪ Supervision ▪ Time management ▪ Conflict management ▪ Human relations	4	4	a2, b2, d2
8	Decision making and Problem solving	▪ Decision making ▪ Problem solving ✓ Process and approach, steps and methods of dealing with complaints of patients and other health team members.	1	1	a2, b2, d2
9	Controlling	▪ Definition, types ▪ Principles of controlling ▪ Making standard ▪ Evaluating quality in health care	1	1	a2, b2, d2
10	Recording and reporting	▪ Definitions ▪ Records & Reports ▪ Responsibility for maintain records and reports ▪ Type of records and reports maintained in the ward, importance and use of records and reports. ▪ Records and reports maintained in Primary Health Center	1	1	a2, d2
11	Legal and ethical issues in managerial role	▪ Accountability ▪ Negligence & Malpractice ▪ Risk management ▪ Legislation ▪ Personnel issues	1	1	a2, b2, d2

12		Final exam	1	1	a2, b2, c2, d2
Number of Weeks /and Units Per Semester					

B. Case Studies and Practical Aspect:

No.	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester				

C. Tutorial Aspect:

No.	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

11				
12				
Number of Weeks /and Units Per Semester				

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment** 1: Concept of budget	W5	**5**	a1, c1
2	**Assignment 2:** Negligence & Malpractice	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c1, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2

3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

5.

2- Essential References:

2.

3- Electronic Materials and Web Sites etc.:

Websites:

▪

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	Pharmacognosy II			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	2st year / 1st semester			
5	**Pre –Requisite (if any):**	Botany			
6	**Co –Requisite (if any):**	Phytochemistry and Applied Pharmacognosy			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقر**	Faculty : كلية.....			
12	**Prepared for:**	وزارة التعليم الفني والتدريب المهني			
[13	**Date of Approval:**	2021-2022			

II. Course Description:

The aims course is to help students to be able to identify the sources from different parts of the plant. The course focuses on medicinal drugs from leaves, flowers and barks with their active constituents and medicinal uses.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
O. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.1	Identify methods for detection and microscopical identification of natural product	**A1**	Show the basic concepts, principles and theories of science and drugs.
a1.2	Recognize the biologically active principles and use in each plant part.	**A1**	Show the basic concepts, principles and theories of science and drugs.
a.1.3	Clarify methods for detection and identification of natural unorganized drugs chemically.	**A1**	Show the basic concepts, principles and theories of science and drugs.
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	Assess unknown morphologically and Microscopically	**B1**	Specify the best modern technology method for drugs manipulation and development
b1.2	Specify the powdered drug is related to flower, seeds, fruits and herb.	**B1**	Specify the best modern technology method for drugs manipulation and development
b1.3	Differentiate between different types of unorganized drugs.	**B1**	Specify the best modern technology method for drugs manipulation and development
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1.1	Use the microscope to decide a given unknown plant powder.	**C1**	Perform the best methodology for drug extraction, synthesis, formulation, storage, dispensing and marketing.
c1.2	Perform chemical test for identification unorganized drugs	**C1**	Perform the best methodology for drug extraction, synthesis, formulation, storage, dispensing and marketing.
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d4.1	Work with a team or alone to perform reports effectively	**D4**	**.** Work in a team with colleagues and other related individuals

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:		
Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

a1.1	- Identify methods for detection and microscopical identification of natural product.	Interactive lectures Demonstration	MCQs- Essay questions- True/False Questions- Matching Question Draw
a1.2	- Recognize the biologically active principles and use in each plant part.	Interactive lectures Demonstration Discussion	MCQs- Essay questions- Matching Questions- True/False Questions
a1.3	- Clarify methods for detection and identification of natural unorganized drugs chemically.	Interactive lectures Demonstration Discussion	MCQs- Essay questions- True/False Questions- Matching Questions

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
b1.1	- Assess unknown drugs morphologically and microscopically.	Group discussion Cooperative learning Problem solving	Group discussion evaluation Individual and group work Reports
b1.2	- Specify the powdered drug is related to flower, seeds, fruits and herb.	Group discussion Cooperative learning Problem solving	Group discussion evaluation Individual and group reports
b1.3	- Differentiate between different types of unorganized drugs.	Group discussion Cooperative learning Brain storming	Group discussion evaluation Individual and group reports

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1.1	- Use the microscope to decide a given unknown plant powder.	Practical Lab and demonstration	Lab exam macro- and microscopically and Lab report
c1.2	Perform chemical test for identification unorganized drugs.	Practical Lab and demonstration	Lab exam and Lab report

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d4.1	- Work with a team or alone to perform reports effectively	Presentation Cooperative learning	Presentation assessment Individual and group work Short report

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Alkaloids**	Introduction and definition Leaves (Atropa belladona , Datura , Hyoscyamus , Tobacco.	1	2	a1.1- a1.2- b1.1- b1.2- d4.1
2	**Alkaloids: Leaves**	Ephedra, Tea, Cacao, Catha, jaborandi	2	2	a1.1- a1.2- b1.1- b1.2- d4.1
3	**Alkaloids: Barks**	. Cinchona, Pomegranate	3	2	a1.1- a1.2- b1.1- b1.2- d4.1
4	**Alkaloids: Root and Rhizome**	Rauwolfia root, Ipeca cuanha	4	2	a1.1- a1.2- b1.1- b1.2- d4.1
5	Alkaloids: Fruit	. Opium, capsaicin, Ergot, Curare, Seed, Nux vomica, Colchicum, Calabar, Fenugreek, Castor oil seed	5,6	4	a1.1- a1.2- b1.1- b1.2- d4.1
6	Fixed oils	Olive Oil, Sesame oil, Corn oil, Iodized oil, Lanoline	7,8	4	a1.1- a1.2- b1.1- b1.2- d4.1
6	Mid exam	Mid exam	9	2	a1.1- a1.2- b1.1- b1.2-d4.1
7	**Resins**	**Introduction and definition** **Resins : Colophony , Podophyllum , Jalap , Cannabis Oleoresins (Turpentine)** **Oleo - Gum – resin (Myrrh, Asafetida** **Balsams (Storax, Peru)**	10,11	4	a1.1- a1.2- b1.1- b1.2- d4.1
8	**Chromatography**	Chromatography	12,13	4	a1.1- a1.2- b1.1- b1.2- d4.1
9	**Extraction and Identification**	Extraction and Identification	14	2	a1.1- a1.2- b1.1- b1.2- d4.1
10	**Quality control**	Quality control	15	2	a1.3- b1.3- d4.1
11	Final exam	Final exam	16	2	a1.1- a1.2- a1.3- b1.1- b1.2- b1.3- d4.1
Number of Weeks /and Units Per Semester				**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)

1	Microscopical identification of Medicinal flowers (Clove, Chamomile)	**1,2**	4	**c1.1- d4.1**
2	Microscopical identification of Medicinal fruits (Anise, Fennel, Coriander)	**3,4,5**	**6**	**c1.1- d4.1**
3	Mid exam	**6**	**2**	**c1.1- d4.1**
4	Microscopical identification of Medicinal seeds (Linseed, Nutmeg, Fenugreek)	**7,8,9**	6	**c1.1- d4.1**
5	Microscopical identification of Medicinal herbs (Peppermint, Thyme)	**10,11**	4	**c1.1- d4.1**
6	Chemical tests for the identification of Myrrh, Olibanum, Benzoin, Gum Arabic, Tragacanth, Aloe.	12,13	4	**c1.2- d4.1**
7	**Final exam.**	**14**	**2**	**c1.1-c1.2-d4.1**
Number of Weeks /and Units Per Semester			28	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Number of Weeks /and Units Per Semester	14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

30-	Participation& semester work
31-	Mid term exam
32-	Practical exam
33-	Quizzes
34-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	MCQs- Essay questions- True/False Questions- Matching Questions- table complete- Draw	**a.1.1- a.1.2- a.1.3**	8,16	55
2	Group discussion evaluation	**b1.1-b1.2**	5	5
3	Lab exam macro- and microscopically and Lab report	**c1.1-c1.2**	8-14	35
4	Presentation evaluation	**d4.1**	15	5
Total				**100**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes

1	Quiz, Assignment, oral exam	Weekly	10	10%	a.1.1- a.1.2- a.1.3- b.1.1-b.1.2- d.4.2
2	Practical reports	Weekly	5	5%	c.1.1-c.1.2
3	Mid exam Theory	8	15	15%	a.1.1- a.1.2-b.1.1-b.1.2
4	Mid exam Practical	8	10	10%	c.1.1-c.1.2
5	Final exam theory	16	40	40%	a.1.1- a.1.2-b.1.1-b.1.2
6	Final exam practical	15	20	20%	c.1.1-c.1.2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

2. Barnes, J., Anderson, L. A. and Phillipson, J. D.: "Herbal medicines" Pharmaceutical Press, 3rd ed., 2007.

2J. Bruneton: "Pharmacognosy, Phytochemistry, Medicinal Plants" Lavoisier Publishing, Intercept 2nd ed., 2008.

2- Essential References:

5. Trease, G.E. & Evans, W.C.; Pharmacognosy, W.B. Saunders Publishers, Ltd,16th ed., 2006.

3- Electronic Materials and Web Sites etc.:

- Vascular plant image library

http://botany.csdl.tamu.edu/FLORA/gallery.htm

- A modern herbal

3. http://www.botanical .com
4. http://www.pubmed.com

- http://www.herbmed.com

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
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4	**Assignments & Projects:**

	Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
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7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Pharmacology ll**			
2	**Course Code & Number:**				
3	**Credit Hours: 3hr**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3hr	2hr	---	2hr
4	**Study Level/ Semester at which this Course is offered:**	2nd year / 1st semester			
5	**Pre –Requisite (if any):**	pharmacology l			
6	**Co –Requisite (if any):**	No found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:**	Class كلية الآفاق للعلوم الطبية والتقنية			
12	**Prepared by:**	كلية الآفاق للعلوم الطبية والتقنية			
13	**Date of Approval:**	2021-2022			

II. Course Description:

Providing the student with the knowledge and understanding about the mechanism of action, therapeutic uses, side effect and contraindication of drugs affecting gastrointestinal tract, respiratory system and autacoid and endocrine system.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
P. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define the drugs affecting gastrointestinal tract, respiratory system and autacoid and endocrine system.	**A1**	Recognize the side effects of various drugs .
a2	Identify action and indication of the drugs	**A2**	Explain Mechanism of action of drugs affecting gastrointestinal tract, respiratory system and autacoid and endocrine system.
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	list precaution to be taken for each drug.	**B1**	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease
b2	Deal with patient when side effect occurred.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Perform some experiments in pharmacology.	**C1**	
c2	The ability to interact with experimental animals	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Present scientific topics in seminar.	**D1**	
d2	work as team.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:		
Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

a1	Define the drugs affecting gastrointestinal tract, respiratory system and autacoid and endocrine system.	Lectures Group discussion.	Quiz Mid-term exam Final term exam
a2	Identify action and indication of the drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Recognize the side effects of various drugs .	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Explain Mechanism of action of drugs affecting gastrointestinal tract, respiratory system and autacoid and endocrine system.	Lectures Group discussion.	Quiz Mid-term exam Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	list precaution to be taken for each drug.	Lectures Group discussion.	Written test Oral exam
b2	Deal with patient when side effect occurred.	Lectures Group discussion.	Written test Oral exam
	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease	Lectures Group discussion.	Written test Oral exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Perform some experiments in pharmacology.	Practical	Practical exam
c2	The ability to interact with experimental animals	Practical	Practical exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Present scientific topics in seminar.	Seminar Group discussion.	Mid-term exam Final term exam
d2	work as team.	Seminar Group discussion.	Mid-term exam Final term exam

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**G.I.T**	• Antiulcer and antacid drugs.	1	2	
2		• Emetics and antiemetic drugs.	2	2	
3		• Liver disease and gallstones • Constipation & laxatives	3	2	
4		• Diarrhea & anti-diarrheal agents. • Inflammatory bowel disease (IBD).	4	2	
5		• Anorexigenic agents • Appetizers. • Digestants. • Carminatives.	5	2	
6	**Respiratory System (R.S)**	• Cough therapy. • Respiratory stimulants.	6	2	
7		• Drugs used in treatment of Bronchial Asthma. • Drugs used in treatment of Rhinitis.	7	2	
8		**Midterm exam**	8	2	
9	**Autacoids**	• Histamine & antihistamines Eicosanoids, and their uses	9	2	
10		• PAF, bradykinin • Serotonin agonists & antagonists.	10	2	

		• Drugs for treatment of migraine headache			
11	**Endocrine System**	• Hypothalamic & pituitary gland. • Thyroid and anti-thyroid drugs. Oxytocics and uterine relaxants	11	2	
12		• Glucagon and adrenocortical steroids	12	2	
13		• Insulin &oral hypoglycemic agents.	13	2	
14		• Sex hormones. - Female sex hormones. - Male sex hormones.	14	2	
15		• Contraceptives.	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Common dosage form	**1**	2	
2	Drug information	**2**	2	
3	Commonly used laboratory animals in experimental and handling ,restraint of these animals	**3**	2	
4	Routes of drugs administration to the laboratory animals	**4**	2	
5	Techniques of blood collection in laboratory animals	**5**	2	
6	Study of the action of drugs on rabbits eye	**6**	2	
7	**Midterm exam**	**7**	2	
8	effect of cardio stimulant and depressant on perfused frog heart	**8**	2	
9	Study of absorption &excretion of KI in man	**9**	2	
10	Study of absorption &excretion of aspirin in man	**10**	2	

11	Study of effect of drugs on cilliary movement of frog esophagus	**11**	2	
12	Study of effect of drugs on frog rectus muscles preparation	**12**	2	
13	Effect of saline purgative on frog intestine and the used of rehydration solution	**13**	2	
14	Experimental evaluation of anti-diabetics	**14**	2	
15	**Final exam**	**15**	2	
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

1- lecture.
2- Discussion in groups.
3- Researching in groups for different topics as assignments.
4-Seminar Group discussion.

VI. Assessment Methods of the Course:

1- Participation& semester work	to assess intellectual skills
2- Mid-term exam	to assess the knowledge & understanding
3-Final term exam	to assess the knowledge & understanding
4- Practical exam	to assess the practical skills.
5- Quizzes	to assess the knowledge & understanding
6- Workbook Assignments	to assess the general and transferable skills.

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1				
2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Semester work		10	10%	
2	Mid-Term Examination		20	20%	
3	Practical Examination		30	30%	
4	Final-term Examination		40	40%	
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

4.

2- Essential References:

6.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
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7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Pharmaceutics II**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	-	1hr
4	**Study Level/ Semester at which this Course is offered:**	2nd year / 1st semester			
5	**Pre –Requisite (if any):**	Pharmaceutics I			
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقرر**	Faculty : كلية.....			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
[13	**Date of Approval:**	2021-2022			

II. Course Description:,وصف المساق

This course is intended to provide the Knowledge and skills necessary for the continued developing roles of pharmacist. The course will cover the formulation of different types of semisolid dosage forms as skin drug delivery system, Pharmaceutical inserts suppositories and pessaries, Aerosols also learn about pharmaceutical products stability and stability testing

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
Q. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.2	Students will: understand and explain the pharmaceutics and pharmaceutical dosage forms (i.e., medications used by patients) and understandthe physicochemical properties of each dosage form.	**A1**	**A1**
a1.3	understand and illustrate the various materials used in formulation of each dosage form and understand and practice the different methods of compounding of solution, suspension and emulsion dosage forms .	**A2**	**A2**
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	Students will: Compare various topical preparations used in pharmaceutical dosage forms and assess their advantages and disadvantages.	**B1**	**B1**
b1.2	Demonstrate capability of choosing the appropriate preparation method for a particular pharmaceutical product prescription compounding.	**B2**	**B2**
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
C1.1	Students will: Demonstrate and Apply physicochemical and biopharmaceutic concepts to dosage form design.	**C1**	**C1**
C1.2	Choose appropriate formulations to achieve target properties of given medications and identify the proper measurement and compounding method.	**C2**	**C2**
C1.3	Formulate significant research questions, design experiments, use appropriate chemical and instrumentation, and analyze and interpret data.	**C3**	**C3**
D. Transferable Skills: Upon successful completion of the course, students will be able to:			

d 4.1	Students will: Skills in scientific research and efficiently use to modern technology in getting information and employee them.	**D1**	**D1**
d 4.2	Work in team and be active, cooperative member and able in solving problem and work under stress and have communication skill.	**D2**	**D2**
d 4.3	Writing reports representing data clearly	**D3**	**D3**

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Students will: understand and explain the pharmaceutics and pharmaceutical dosage forms (i.e., medications used by patients) and understand the physicochemical properties of each dosage form.	▪ lectures ▪ Lab Lectures ▪ Discussions ▪ Solve exercises	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams
a2	understand and illustrate the various materials used in formulation of each dosage form and understand and practice the different methods of compounding of solution, suspension and emulsion dosage forms .	▪ Lectures ▪ Lab Lectures ▪ Discussions ▪ Solve exercises	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Students will: Compare various topical preparations used in pharmaceutical dosage forms and assess their advantages and disadvantages.	▪ Lectures ▪ Lab Lectures ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams ▪ Evaluation
b2	Demonstrate capability of choosing the appropriate preparation method for a particular pharmaceutical product prescription compounding.	▪ Lectures ▪ Lab Lectures ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams ▪ Evaluation

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
C 1	Students will: Demonstrate and Apply physicochemical and biopharmaceutic concepts to dosage form design.	▪ Lab Practice ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams
C 2	Choose appropriate formulations to achieve target properties of given medications and identify the proper measurement and compounding method.	▪ Lab Practice ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams
C 3	Formulate significant research questions, design experiments, use appropriate chemical and instrumentation, and analyze and interpret data.	▪ Lab Practice ▪ Discussions ▪ Solve exercises ▪ Assignments	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and exams
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
d1	Students will: Skills in scientific research and efficiently use to modern technology in getting information and employee them.	▪ Assignment(individually and group) ▪ Exercises ▪ Focus Group	▪ Presentations ▪ Evaluation
d 3	Work in team and be active, cooperative member and able in solving problem and work under stress and have communication skill.	▪ Assignment(individually and group) ▪ Exercises ▪ Focus Group	▪ Presentations ▪ Evaluation
d2	Writing reports representing data clearly	▪ Assignment(individually and group) ▪ Exercises ▪ Focus Group	▪ Presentations ▪ Evaluation

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Parenteral preparation:**	▪ Pre-formulation ▪ Advantages , Route of administration of injection ▪ Water for injection	**1**	**2**	**a1.1-d1.1-d4.1**
2	**Parenteral preparation:**	Formulations detlis Formulaion of injection , Requirements of parenteral solutions, Special injections, large volume parenteral products.	**2**	**2**	**a1.1-d1.1-d4.1**
3	**Pyrogens**	Definition, Characters, sources, Removal and Pyrogens test	**3**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**
4	**Ophthalmic preparations:**	▪ Classification Formulation and Requirements	**4**	**2**	**a1.2- a1.3-b1.1- b1.2--d1.1- d4.1**
5	**Ophthalmic preparations:**	Preparation of eye drops, containers for eye drops, formulations of eye lotions, formulation of eye ointments, formulation of eye suspension and containers, ophthalmic inserts	**5**	**2**	**a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1**
6	**Pharmaceutical Aerosol:**	- Introduction. Formulation and generation of aerosol - Operation of aerosol package. - Product formulation.	**6**	**2**	**a1.1-d1.1-d4.1**
7	**Pharmaceutical Aerosol:**	types of Propellants. - Valves. - Aerosol containers.	**7**	**2**	**a1.1-d1.1-d4.1**
8	**exam**	**Midterm exam**	**8**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**
9	**Semisolid dosage forms**	-Introduction, Definitions and Classes Skin anatomy and percutaneous absorption and factors affecting it	**9**	**2**	**a1.2- a1.3-b1.1- b1.2--d1.1- d4.1**
10	**Ointments**	-classification of ointment bases -methods of preparation of ointment and backaging -example of medicated ointment	**10**	**2**	**a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1**
11	**Creams**	-definition -classification of creams - example of medicated creams	**11**	**2**	**a1.1-d1.1-d4.1**
12	**pastes**	-definition -compostion - example of medicated pastes	**12**	**2**	**a1.1-d1.1-d4.1**
13	**Gels**	-compostion and uses	**13**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**

		-evaluation of drug releas from ointment and cream bases			
14	**Suppositories**	-introduction -advantage and disadvantages -anatomy and physiology of rectum -factors affecting rectal drug absorption -shape and size of suppositories	**14**	**2**	**a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1**
15	**Suppositories**	-type of suppository bases -methods of preparation of suppositories -displacement value -calibration of suppository mould with bases	**15**	**2**	**a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1**
16	**exam**	**Final exam**	**16**	**2**	**a1.1-d1.1- d4.1**
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Milk of magnesia suspension	**1**	**2**	**c1.1-c1.2- d1.1- d4.1**
2	Preparation of phenolated calamine lotion	**2**	**2**	**c1.1-c1.2- d1.1- d4.1**
3	Preparation of methyl salicylate liniment	**3**	**2**	**c1.1-c1.2- d1.1- d4.1**
4	Ointment base properties	**4**	**2**	**c1.1-c1.2- d1.1- d4.1**
5	Yellow simple ointment (oleaginous base)	**5**	**2**	**c1.1-c1.2- d1.1- d4.1**
6	Preparation of sulfur ointment	**6**	**2**	**c1.1-c1.2- d1.1- d4.1**

7	Preparation of absorption ointment bases	**7**	**2**	**c1.1-c1.2- d1.1-d4.1**
8	**Midterm exam**	**8**	**2**	**c1.1-c1.2- d1.1-d4.1**
9	Preparation of **i**odine ointment Preparation emulsifying ointment	**9**	**2**	**c1.1-c1.2- d1.1-d4.1**
10	Preparation of white filed ointment Preparation of atropine sulfate eye ointment	**10**	**2**	**c1.1-c1.2- d1.1-d4.1**
11	Preparation of w/o emulsion ointment base Cold cream type base	**11**	**2**	**c1.1-c1.2- d1.1-d4.1**
12	Preparation of o/w emulsion ointment base Hydrophilic ointment	**12**	**2**	**c1.1-c1.2- d1.1-d4.1**
13	Preparation of water soluble base (PEG)	**13**	**2**	**c1.1-c1.2- d1.1-d4.1**
14	Preparation of zinc and ichthammol ointment	**14**	**2**	**c1.1-c1.2- d1.1-d4.1**
15	**Final exam**	**15**	**2**	**c1.1-c1.2- d1.1-d4.1**
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

(a) Lectures
(b) Class discussion
(c) Exercises solving
(d) Collaborative learning / pair work / group work
(e) Assignments
(i) Lab Lectures
(j) Lab practice

VI. Assessment Methods of the Course:

35- Participation& semester work
36- Mid term exam
37- Practical exam

38-	Quizzes
39-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	MCQs- Essay questions- True/False Questions- Matching Questions- table complete	8,16	55	a2.1,a3.1,a3.2,a3.3,a3.4
2	Group discussion evaluation	5	5	b2.1,b2.2,b2.3
3	Lab exam macro- and microscopically and Lab report	8-14	35	**c1.1-c1.2**
4	Presentation evaluation	15	5	**d4.1**
Total			**100**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quiz, Assignment, oral exam	Weekly	10	10%	a.1.1- a.1.2- a.1.3- b.1.1-b.1.2- d.4.2
2	Practical reports	Weekly	5	5%	c.1.1-c.1.2
3	Mid exam Theory	8	15	15%	a.1.1- a.1.2-b.1.1-b.1.2
4	Mid exam Practical	8	10	10%	c.1.1-c.1.2
5	Final exam theory	16	40	40%	a.1.1- a.1.2-b.1.1-b.1.2
6	Final exam practical	15	20	20%	c.1.1-c.1.2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1-Pharmaceutical Dosage Forms and Drug Delivery Systems by Loyd V. Allen, Jr & Howard C. Ansel, Lippincott Williams & Wilkins 10thEdition ,2014

2-Aulton's Pharmaceutics, The Design and Manufacture of Medicines, Edit.: Michael E. Aulton, Kevin M. G. Taylor Pub.: Churchill Livingstone, 4thedition, 2013.

2- Essential References:

- Martin's Physical Pharmacy and Pharmaceutical Sciences By : Patrick J. Sinko, Lippincott Williams & Wilkins , 2006, 5Edition
7. Pharmaceutical Dosage Forms and Drug Delivery Systems by Loyd V. Allen, Jr., Nicolas G. Popovich & Howard C. Ansel, Lippincott Williams&Wilkins 8th Edition ,2005

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Toxicology**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	2nd year /2nd semester			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقر**	Faculty : كلية.....			
12	**Prepared for:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description:

This course is deigned to provide the student with the necessary knowledge and skills in toxicology to enable him / her to deal toxic substances and to discover their effects an also their severity on man animals and plants , And also to understand how t carryout the necessary action in case of toxicity.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
R. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Design of toxic agents to main groups	**A1**	
a2	Explain different type of Plant, Corrosive, Narcotics, Volatile groups.	**A2**	

B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate between extraction and identification methods	**B1**	
b2	Deals with this toxic agents in the laboratory, by safe handling of chemicals, avoid hazards associated with use.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Study Toxic sample to analyze & determines type of toxic agents.	**C1**	
c2	Takes biological sample to analyze of toxic agents.	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Advice patients, workers….etc about the physical properties, hazards, safety steps when deals with this poisons.	**D1**	
d2	Accepts Attitude on working in a team to prepare a scientific topic and reports.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Identify the chemical and physical properties of toxic substances	Lectures, Discussion.	Mid term exam
a2	Mention the effects and severity of chemicals, and air pollutions on man, animal and plants.	researching in groups for topics course as assignments	Final term exam
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
b1	Analyzes and carry out test for toxic agents relating to qualitative &quantities' information.	Large or small group discussion	Participation& semester work
b2	Deals with this toxic agents in the laboratory, by safe handling of	Small Group Projects	

	chemicals, avoid hazards associated with use.		

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Takes biological sample to analyze of toxic agents.	Independent Research	Practical exam
c2	Study Toxic sample to analyze & determines type of toxic agents	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Manages, controls time and organize his work.		Workbook Assignments
d2	Accepts Attitude on working in a team to prepare a scientific topic and reports		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	-Introduction to Toxicology. - History & Scope of toxicology. - Classification of toxic agents.	1	2	
2	**Toxicology evaluation**	a. Toxic dynamic. b. Dose - response relationship in Toxicity.	2	2	
3	**Management of Poisoning :**	a)General characters, Symptom Treatment and Haemodialysis. b) Antidote Therapy.	3	2	

4	**Household poisons :**	a. Cosmetics. b. Food poisoning (milk –Fish) - Botulism, Bacterial. Chemical food Poisson	4	2	
5	**Industrial Poisons:**	General prevention of Poisoning. B. Corrosive: acid, base, phenol.	5	2	
6		Gas poison: General Characters, toxicity mechanism of action, source, fatal - Dose poisoning. - Antidotes for the following: - Carbon monoxide - Cyanides	6	2	
7		**Midterm exam**	7	2	
8		- D. Heavy metals poisoning: General characters, source ,action route & fatal dose, antidotes: - Lead - Arsenic Mercury	8	2	
9	**Pesticides :**	General characters, classification , route & Fatal Dose, toxicity action ntidote:- c hlorinated insecticides - Organophosphorouse comp.	9	2	
10	**Drug toxicology:**	General characters , Fatal dose, action , antidotes: - Barbiturate drug poison. - Analgesics poison (Aspirin & Paracetamol). Benzodiazepines group	10	2	
11	**Animal poisoning**	General characters ,Route & Fatal dose, action , antidotes: Snake bite ,	11	2	
12		Scorpion stings Black widow spider.	12	2	
13	**Environmental of community Poisoning :**	* Air pollution by Radiations. - Plastic poisons.	13	2	

14		* Plants poisons General characters, source , Fatal dose & route of poison , action , antidotes : - Atropine group - Nicotine's & amphetamine - Hashish (cannabis) - Strychnine	14	2	
15		*Narcotic substances General characters, action, fatal - dose, route of poisons, antidotes : - Opium Morphine derivatives Cocaine & Heroine. - Alcohol's : Methanol & Ethanol	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction;** *Apparatus& Reagents. -Apparatus. -Reference compounds& reagent. * Practical aspect of analytical toxicology. -Laboratory management and practice. -Thin layer Chromatography. -Ultraviolet of visible spectrophotometer. -Monographic analytical of toxicology data.			
2	**Corrosive Poison:** -Method of extraction. -Identification of Strong acids: H2SO4,HCL,HNO3. -Identification of Strong bases: NaOH,KOH,NH4OH.			
3	**Common metals:** -Reinch's test.			
4	**Sedative and Hypnotics:** -Method of extraction. Identification of; Benzodiazepines,			

	Barbiturates.			
5	**Pesticides:** -Organ phosphorus compounds. -Method of extraction. -Identification.			
6	**Volatile Poisons:** -Method of extraction. - Identification of ; Ethanol, Methanol, Cyanide, Acetone, Formaldehyde.			
7				
8	**Midterm exam**			
9				
10				
11				
12				
13				
14				
15	**Final exam**			
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

40-	Participation& semester work
41-	Mid term exam
42-	Practical exam
43-	Quizzes
44-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**MCQs- Essay questions- True/False Questions- Matching Questions- table complete- Draw**	**a.1.1- a.1.2- a.1.3**	**8,16**	55
2	Group discussion evaluation	**b1.1-b1.2**	**5**	5
3	**Lab exam macro- and microscopically and Lab report**	**c1.1-c1.2**	**8-14**	35
4	**Presentation evaluation**	**d4.1**	**15**	5
Total				**100**

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1-R.E. Gosselin & H.C. Hodge - Clinical Toxicology - 4th edition Baltimore Williams & Wilking.

2- Essential References:

2-R.H. Derisbach - HandBook of poisoning - 9th edition -Lange Medical.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
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4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
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7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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الجهاز التنفيذي

SYLLABUS
YEAR (3)
SEMESTER (1)

REPUBLIC OF YEMEN
Ministry of Technical Education
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Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Biostatistics**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

This course is designed to acquire student with basic principles of statistics and how to deal with different data at various clinical settings and researches

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs** (مخرجات تعلم البرنامج)	
S. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Identify Types of variables, classification of data, statistical test and their applications to health		

a2	Recognize types of hospital records, nonparametric tests and methods of data presentation		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate between types of hospital records **and** alternative and null hypotheses		
b2	Analysis the data and tabulation and interpret the results		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Apply methods of graphical presentation		
c2	Records different types of hospital data		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Consider confidentiality during data management & work within legal aspect		
d2	Enhance lifelong, self-directed working		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Identify Types of variables, classification of data, statistical test and their applications to health	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Recognize types of hospital records, nonparametric tests and methods of data presentation	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

b1	Differentiate between types of hospital records **and** alternative and null hypotheses	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Analysis the data and tabulation and interpret the results	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Apply methods of graphical presentation	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Records different types of hospital data	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Consider confidentiality during data management & work within legal aspect	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Enhance lifelong, self-directed working	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction	▪ Definition and application of biostatistics ▪ Variables ▪ Hypothesis ▪ Sampling types of samples and methods.	1	1	a1, b1, c1, d1
2	Data	• Data collection • Classification of data • Methods of data presentation • Tabulation of data • Graphic presentation of data • Uses of frequency distribution tables.	3	3	a1, b1, c1, d1
3	Statistical test and their applications to health	• Mean, SD, mode and Median • Applicable examples on biostatistics • Measurement of correlation and calculation of correlation coefficient. • Research analysis. • Vital statistics.	3	3	a1, b1, c1, d1
4		Midterm exam	1	1	a1, b1, c1, d1
5	Records	• Types of hospital records. • The importance of statistical ratio. • Statistical data analysis to obtain percentage, rate, test and graphic presentation.	2	2	a2, b2, c2, d2
6	Nonparametric tests	• Association and Causation • Correlation and regression • Analysis of Variance • Multivariate analysis	4	4	a2, b2, c2, d2
7		Final exam	1	1	a2, b2, c2, d2
Number of Weeks /and Units Per Semester					

V. Teaching Strategies of the Course:

- Interactive lecture

- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1: Parametric tests**	W5	**5**	a1, c1
2	**Assignment 2: Nonparametric tests**	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example
2- Essential References:
3- Electronic Materials and Web Sites etc.:
Websites: ▪

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Research Methodology**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

This course is necessary for nurses to be familiar with research principles, needed to conduct research, collect research data, and interpret published studies, because research is essential to improving patient care. This course includes identifying specific problem to be investigated, initiating research, research ethics, writing the literature review, study design, methodology, sampling instruments, research statistics, data management, manuscript preparation, manuscript submission, and research presentation.

III. Course Intended Learning Outcomes (CILOs) : **(مخرجات تعلم المقرر)**	**Referenced PILOs** **(مخرجات تعلم البرنامج)**
T. Knowledge and Understanding: Upon successful completion of the course, students will be able to:	

a1	Identify research problem, question, literature review, study design for the research to be investigated		
a2	Recognize the research methodology, data collection instruments, research statistics, data management, manuscript preparation and research presentation		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Compare quantitative and qualitative research approaches, observational and experimental studies, probability and nonprobability sampling.		
b2	Use critical thinking to examine literature review and research outcomes relevant to emergency practices.		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Design an appropriate research question, study aim, study hypothesis, research types and study design, sampling methodology and data collection instruments		
c2	Formulate research projects and manuscript in a structured and predetermined and fascinating style.		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Demonstrate competent communication, presentation skills, group work skills and understanding for their future role in utilizing research findings.		
d2	Sought ethical committee authorization prior to study commencement		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Identify research problem, question, literature review, study design for the research to be investigated	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

a2	Recognize the research methodology, data collection instruments, research statistics, data management, manuscript preparation and research presentation	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
	(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Compare quantitative and qualitative research approaches, observational and experimental studies, probability and nonprobability sampling.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Use critical thinking to examine literature review and research outcomes relevant to emergency practices.	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
	(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Design an appropriate research question, study aim, study hypothesis, research types and study design, sampling methodology and data collection instruments	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Formulate research projects and manuscript in a structured and predetermined and fascinating style.	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
	(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

d1	Demonstrate competent communication, presentation skills, group work skills and understanding for their future role in utilizing research findings.	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Sought ethical committee authorization prior to study commencement	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Identify research problem, funding, and research team**	▪ **Identify specific problem, procedure, or question to be investigated** ○ Introduction ○ Justification ▪ **Funding** ▪ **Initiating the research** ○ Purpose of the study ***protocol*** ○ Protocol structure ○ Prepare a Question ○ Study hypothesis ○ Study aims ▪ **Assembling the research team** ✓ Introduction ✓ Methods ▪ **Research ethics** ○ Scientific value ○ Benefits forgone ○ Informed consent	**2**	**4**	a1, b1, c1, d1
2	**Selection of types of research**	▪ **Selection of types of research** ○ Qualitative ○ Quantitative ✓ Experimental research ✓ Nonexperimental research ✓ Survey research ○ Retrospective research ▪ longitudinal design	**1**	**2**	a1, b1, c1, d1
3	**The literature review**	▪ **The literature review** ○ Purposes of the Literature Review ○ Literature Sources	**2**	**4**	a1, b1, c1, d1

		✓ Types of Information Sources ✓ Primary and Secondary Source ✓ Grey Literature ○ Search Strategies ✓ Develop a Search Strategy ✓ Ask a Librarian ✓ Finding Tools ✓ Selected Databases ○ Writing the Literature Review ✓ Extracting Information from Literature Sources ✓ Critiquing the Literature Review in a Research Article ○ Components of a Literature Review			
4	***Study design***	▪ ***Study design*** ○ Observational studies ✓ Cross-sectional studies ✓ Ecological studies ✓ Cohort studies ✓ Case-control studies ✓ Case reports and case series ○ Experimental or interventional studies ✓ Main types of clinical trials ✓ Key features of clinical trials ✓ Blinding ▪ **Questionnaire studies** ▪ **Typical errors in questionnaire design** ▪ **Case control studies** ▪ **Case reports** ▪ **Interview studies** ▪ **Focus group studies**	**2**	**4**	a1, b1, c1, d1
5		**Midterm exam**	**1**	**2**	a1, b1, c1, d1
6	***Methodology***	▪ **Concepts of *methodology*** ○ Validity & repeatability of study methods ✓ Response rate ✓ Study variables ✓ Study end points ▪ ***Sampling* study subjects** ○ Define the Population ○ Sampling frame	**1**	**2**	a2, b2, c2, d2

		○ Sampling methodology ○ Stratified sampling ○ Nonprobability sampling			
7	**Data collection *instruments***	▪ **Data collection *instruments*** ○ Surveys ○ Designing a survey ○ Before a survey ○ During the survey ○ After the survey ○ Data collection performs ▪ **Questionnaire** ▪ **Bias and confounding** ○ Study design errors ○ Systematic error (bias) ○ Confounding ○ Common confounders ▪ **Interview studies**	**2**	**4**	a2, b2, c2, d2
8	**Principles of clinical research *statistics***	▪ **Principles of clinical research *statistics*** ○ Sample size ○ Study power ○ Statistical versus clinical significance ○ Gather and Analyze Data ✓ Descriptive Statistics • Qualitative analysis • Quantitative analysis • Inferential Statistics ▪ **Databases & principles of *data management*** ○ Defining data to be collected ○ Database design ○ Data entry ○ Data validation	**1**	**2**	a2, b2, c2, d2
9	**Research publication**	▪ **Introduction** ▪ **Important principles** ○ Duplicate publication ▪ **Readability** ▪ **Publication types** ▪ **Manuscript preparation** ○ Original research manuscripts ✓ Abstract ✓ Introduction ✓ Methods ✓ Results ✓ Discussion ✓ Case reports	**1**	**2**	a2, b2, c2, d2

		✓ Systematic reviews & meta-analyses ✓ Letter to the editor ▪ **Manuscript submission** o The cover letter ▪ **Feedback from journals** ▪ **Post-acceptance issues** o Social media			
10	**Research presentation**	▪ **Research presentation** o Data **show presentation** (Tables, Charts, Graph, …) ▪ **Proposal Discussion**	**2**	**4**	a2, b2, c2, d2
11		**Final exam**	**1**	**2**	a2, b2, c2, d2
Number of Weeks /and Units Per Semester					

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1:** literature review	W5	**5**	a1, c1
2	**Assignment 2:** report presentation	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

6.

2- Essential References:

3.

3- Electronic Materials and Web Sites etc.:

Websites:

-

X. Course Policies (2007) Based on the Uniform Students' By law) :تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.

5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

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الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**pharmacology lll**			
2	**Course Code & Number:**				
3	**Credit Hours:3hr**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2hr	2hr	---	---
4	**Study Level/ Semester at which this Course is offered:**	2nd year / 2nd semester			
5	**Pre –Requisite (if any):**	pharmacology l & ll			
6	**Co –Requisite (if any):**	No found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:**	Class كلية الآفاق للعلوم الطبية والتقنية			
12	**Prepared by:**	كلية الآفاق للعلوم الطبية والتقنية			
13	**Date of Approval:**	2021-2022			

II. Course Description:

Overall Aims of Course

Providing the student with the knowledge and understanding about the mechanism of action, therapeutic uses, side effect and contraindication of drugs affecting blood and central nervous system**.**

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
U. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define the drugs affecting blood and central nervous system	**A1**	Recognize the side effects of various drugs .
a2	Identify action and indication of the drugs	**A2**	Explain Mechanism of action of drugs affecting blood and central nervous system
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	list precaution to be taken for each drug.	**B1**	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease
b2	Deal with patient when side effect occurred.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Perform some experiments in pharmacology.	**C1**	
c2	The ability to interact with experimental animals	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Present scientific topics in seminar.	**D1**	
d2	work as team.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Define the drugs affecting blood and central nervous system	Lectures Group discussion.	Quiz Mid-term exam Final term exam

a2	Identify action and indication of the drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Recognize the side effects of various drugs .	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Explain Mechanism of action of drugs affecting blood and central nervous system	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	list precaution to be taken for each drug.	Lectures Group discussion.	Written test Oral exam
b2	Deal with patient when side effect occurred.	Lectures Group discussion.	Written test Oral exam
	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease	Lectures Group discussion.	Written test Oral exam
	(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Perform some experiments in pharmacology.	Practical	Practical exam
c2	The ability to interact with experimental animals	Practical	Practical exam
	(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
d1	Present scientific topics in seminar.	Seminar Group discussion.	Mid-term exam Final term exam

d2	work as team.	Seminar Group discussion.	Mid-term exam Final term exam

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Blood**	• Coagulants, Anticoagulants & fibrinolytics.	1	2	
2		• Anti-hyperlipidemic.	2	2	
3		• Haematinic &Haemostatic. • Drugs used in anemia • Plasma expanders	3	2	
4	**Central Nervous System (C.N.S)**	• C.N.S. Stimulants. • Sedatives &hypnotics.	4	2	
5		• Antipsychotic, Neuroleptic agents.	5	2	
6		• Anti-anxiety agents	6	2	
7		• Antidepressant agents.	7	2	
8		**Midterm Exam**	8	2	
9		• Anti-parkinsonism.	9	2	
10		• Antiepileptic agents.	10	2	
11		• Opioid(Narcotic) analgesics. and antagonists.	11	2	
12		• Analgesics, antipyretics and anti-inflammatory agents.	12	2	
13		• General anesthetics. • Local anesthetics.	13	2	
14		• Alcohols (Ethyl alcohol, Methyl alcohol). • Skeletal muscle relaxants & Anti-spastic agents.	14	2	
15		• Review	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7	**Midterm exam**			
8				
9				
10				
11				
12				
13				
14				
15	**Final exam**			
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				

4				
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

1- lecture.
2- Discussion in groups.
3 – Researching in groups for different topics as assignments.
4-Seminar Group discussion.

VI. Assessment Methods of the Course:

1- Participation& semester work	to assess intellectual skills
2- Mid-term exam	to assess the knowledge & understanding
3-Final term exam	to assess the knowledge & understanding
4- Practical exam	to assess the practical skills.
5- Quizzes	to assess the knowledge & understanding
6- Workbook Assignments	to assess the general and transferable skills.

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1				

2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Semester work		20	20%	
2	Mid-Term Examination		20	20%	
3	Final-term Examination		60	60%	
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

5.

2- Essential References:

8.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.

4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

REPUBLIC OF YEMEN
Ministry of Technical Education
And Vocational Training
Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**clinical pharmacy**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	1hr	1hr
4	**Study Level/ Semester at which this Course is offered:**	Level:-3rd year /1st semester			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** مكان تدريس المقرر	Faculty : كلية.....			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description:

The course deals with selected major disease states and their therapy, especially in the individualization of drug usages. The role of the pharmacist in the provision of optimal patient care through monitoring of patients drug therapy is emphasized.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
V. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define the Epidemiology, Etiology, Risk factors for particular condition under study	**A1**	Explain the principles of design and formulation of different dosage forms

a2	Mention the therapeutic approaches, both pharmacological and non-pharmacological in details	**A2**	Explanation of medicines and their sources with regard to their identity ,safety ,optimal medical use ,contraindications to their use, as well as their mechanism of action
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	list precaution to be taken for each prescribed drugs individually or in combination	**B1**	A student can classify groups of drugs and their mechanism of action that can used to treat certain diseases
b2	The student can diagnosed disease according to their manifestations, investigations and physical examinations	**B2**	Calculation of drug doses and dosage regimen
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Acquire skills to diagnosed the case studies precisely	**C1**	Acquisition of the necessary skills to detect fraud in any natural medicines provided
c2	Evaluate critically observations and measurements, in terms of their significance and theory underlying them.	**C2**	Preparation of some pharmaceutical drug forms
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Improve the communications with the patients or physicians	**D1**	Apply the principles of humanitarian needs
d2	Interact effectively with patients, the public and health care professionals; including communication both written and oral.	**D2**	Preparing great plans for the use of medicines

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Define the Epidemiology, Etiology, Risk factors for particular condition under study	Lectures, Discussion.	Mid term exam
a2	Mention the therapeutic approaches, both pharmacological and non-pharmacological in details	visiting hospital to take patient history and medication profile	Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

b1	list precaution to be taken for each prescribed drugs individually or in combination	Large or small group discussion	Participation& semester work
b2	The student can diagnosed disease according to their manifestations, investigations and physical examinations	Small Group Projects	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Acquire skills to diagnosed the case studies precisely	Independent Research	Practical exam
c2	Evaluate critically observations and measurements, in terms of their significance and theory underlying them.	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Improve the communications with the patients or physicians		Workbook Assignments
d2	Interact effectively with patients, the public and health care professionals; including communication both written and oral.		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	Definition, Some medical and pharmaceutical abbreviation, Monitoring of therapy	1	2	a1, a2, d1-3
2	**The Cardiovascular System**	Hypertension.	2	2	a1, b4, d1-3
3	**The Cardiovascular System**	Angina pectoris.	3	2	a1-6, b1-3, c1, c4, d1-3
4	**The Cardiovascular System**	Congestive heart failure	4	2	a1-6, b1-3, c1, c4, d1-3

5	**The Cardiovascular System**	Thrombo-embolic diseases **.**	5	2	a1-6, b1-3, c1, c4, d1-3
6	**Respiratory System**	**Bronchial asthma**	6	2	a1-6, b1-3, c1, c4, d1-3
7		**Midterm exam**	7	2	
8	**Respiratory System**	**Chronic obstructive pulmonary**	8	2	a1-6, b1-3, c1, c4, d1-3
9	**Respiratory System**	**Upper respiratory infections(URI).**	9	2	a1-6, b1-3, c1, c4, d1-3
10	**Upper respiratory infections(URI).**	**Tuberculosis**	10	2	a1-6, b1-3, c1, c4, d1-3
11	**Gastrointestinal System**	**Peptic ulcers and gastritis**	11		a1-6, b1-3, c1, c4, d1-3
12	**Gastrointestinal System**	**Peptic ulcers and gastritis**	12		a1-6, b1-3, c1, c4, d1-3
13	**The Endocrine System**	**Diabetes mellitus**	13		a1-6, b1-3, c1, c4, d1-3
14	**The Endocrine System**	**Thyroid and Parathyroid disease**	14		a1-6, b1-3, c1, c4, d1-3
15	**Renal System.**	**Renal failure., Urinary tract infections.** **urinary lethiasis**	15		a1-6, b1-3, c1, c4, d1-3
16		**Final exam**	16		
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Hypertension	**1**	2	c1, c2, c3
2	Angina pectoris.	**2**	2	c1, c2, c3
3	Congestive heart failure	**3**	2	c1, c2, c3
4	Bronchial asthma	**4**	2	c1, c2, c3
5	Chronic obstructive pulmonary	**5**	2	c1, c2, c3
6	Chronic obstructive pulmonary	**6**	2	c1, c2, c3
7	Tuberculosis	**7**	2	c1, c2, c3
8	**Midterm exam**	**8**	2	c1, c2, c3

9	Peptic ulcers	**9**	2	c1, c2, c3
10	Diabetes mellitus	**10**	2	c1, c2, c3
11	Renal diseases	**11**	2	c1, c2, c3
12	Renal diseases	**12**	2	c1, c2, c3
13	Thyroid disorders (Hypothyroidism)	**13**	2	c1, c2, c3
14	Thyroid disorders (Hyperthyroidism)	**14**	2	c1, c2, c3
15	**Final exam**	**15**	2	c1, c2, c3
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

Interactive lectures
Group discussion- Problem solving
Skill Lab -Lab report
Presentation- Cooperative learning

VI. Assessment Methods of the Course:

45- Participation& semester work
46- Mid term exam
47- Practical exam
48- Quizzes

Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)

1	**Homework Assignments**	1-15	**60**	a2.1,a3.1,a3.2,a3.3,a3.4
2	**Group Assignment.**	4, 8, 12	**40**	b2.1,b2.2,b2.3
Total				**100**

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1					
2					
3					
4					
5					
6					
7					
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

6.

2- Essential References:

9.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:**

	Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Quality Control**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	--	2hr
4	**Study Level/ Semester at which this Course is offered:**	3rd year /1st semester			
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقر**	Faculty : كلية.....			
12	**Prepared for:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

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II. Course Description:

This course is designed to give student general aspect about differents quality tests which involved in various manufacturing and processing drugs industries. ,provide him with high ability to use different types of quality control methods & use different types of spectroscopy methods of drugs analysis.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
W. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define Quality control in drugs manufacturing	**A1**	
a2	Explain different type of Quality control .	**A2**	
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate between different methods of drugs preperations and analysis.	**B1**	
b2	Use the necessary knowledge to maintain the quality of drugs.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Integrate the quality of drugs in his field by following the basic rules of drugs quality control .	**C1**	
c2	Integrate the quality of drugs in his field by following the basic rules of drugs quality control	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Accepts Attitude on team working.	**D1**	
d2	Manages, controls time and organize his work.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
a1	Define Quality control in drugs manufacturing.	Lectures, Discussion.	Mid term exam
a2	Explain different type of Quality control .	researching in groups for topics course as assignments	Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

b1	Differentiate between different methods of drugs preparations and analysis.	Large or small group discussion	Participation& semester work
b2	Use the necessary knowledge to maintain the quality of drugs.	Small Group Projects	

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Analyzes and carry out test for drugs relating to qualitative &quantities' information	Independent Research	Practical exam
c2	Integrate the quality of drugs in his field by following the basic rules of drugs quality control	Workbook Assignments	

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Accepts Attitude on team working.		Workbook Assignments
d2	Manages, controls time and organize his work.		

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	• Quality control Definition .	1	2	
2		• Types of quality control.	2	2	
3		-G. M.P as a type of Q.C. -I.S.O in drug manufacturing	3	2	
4	**In processes Quality control (Raw Materials)**	• sampling: • Solid R.M. &Liquid R.M	4	2	
5		-Analysis: Physical &Chemical tests	5	2	

6		-Packaging Materials analysis	6	2	
7		**Midterm exam**	7	2	
8	**Examples of Physical Quality control on:**	• syrup & suspensions: ○ pH, density, viscosity, sedimentation.	8	2	
9		• tablets & capsules: ○ Weight variation, hardness,	9	2	
10		riability, disintegration, dissolution.	10	2	
11		• Cream & ointments: weight variation, homogenisty.	11	2	
12	**Examples of Chemical Quality control**	a. Spectrophotometric method (UV,VIS,IR,&NMR) theory ,	12	2	
13		principle of work qualitative and quantitative use .	13	2	
14	**Chromatography and general concept of extraction**	- chromatography , types of chromatography	14	2	
15		-general concept of extraction - H.P.L.C, Column & Gas chromatography. Thin layer Chromatography**.**	15	2	
16		**Final exam**	16	2	
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Solid dosage form:** -Hardness of tablets. -Friability of tablets.	1	2	
2	**Solid dosage form:** -Disintegration of tablets.	2	2	
3	**Liquid dosage form:** -Density of Liquids.	3	2	
4	**Liquid dosage form:** - Volume variation of syrup.	4	2	
5	**Semi Solid dosage form:** -Homogeneity of ointment &cream.	5	2	

6	**Spectrophotometric method**	6	2	
7	**Midterm exam**	7	2	
8	Extraction	8	2	
9	Thin layer Chromatography	9	2	
10	-	10	2	
11	-	11	2	
12	-	12	2	
13	-	13	2	
14	-	14	2	
15	**Final exam**	15	2	
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

1. Interactive lectures
2. Group discussion- Problem solving
3. Skill Lab -Lab report
4. Presentation- Cooperative learning

VI. Assessment Methods of the Course:

49-	Participation& semester work
50-	Mid term exam
51-	Practical exam
52-	Quizzes

53-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1				
2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1					
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

World Health Organization -Technical report-Specification for pharmaceutical preparation - 2th edition. W.H.O. Geneva - 1992.

2- Essential References:

Library books

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:**

	Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
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6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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SYLLABUS
YEAR (3)
SEMESTER (2)

REPUBLIC OF YEMEN
Ministry of Technical Education
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Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
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I. Course Identification and General Information:

1	**Course Title:**	**Professional Ethics**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs** (مخرجات تعلم البرنامج)	
X. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define ethics, bioethics, moral, morality, moral dilemma, professional values and models of relationship		

a2	Describe the concepts, principles and theories of ethics and their relationship to clinical practice		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Compare between Value, Beliefs an Attitude		
b2	Differentiate between ethics, morality, Bioethics, medical ethics, health care ethics, clinical ethics & Law		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Use appropriate interpersonal skills when handling ethics		
c2	Apply Nurse-patient relationship in professional manner		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Conceptualize ethics, morality, Bioethics, medical ethics, health care ethics, clinical ethics& Law		
d2	Identify ethics of nursing profession, the human rights and legal issues related to Yemen community		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Define ethics, bioethics, moral, morality, moral dilemma, professional values and models of relationship	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
a2	Describe the concepts, principles and theories of ethics and their relationship to clinical practice	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
b1	Compare between Value, Beliefs an Attitude	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Differentiate between ethics, morality, Bioethics, medical ethics, health care ethics, clinical ethics & Law	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
c1	Use appropriate interpersonal skills when handling ethics	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Apply Nurse-patient relationship in professional manner	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		**Teaching Strategies**	**Assessment Strategies**
d1	Conceptualize ethics, morality, Bioethics, medical ethics, health care ethics, clinical ethics& Law	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Identify ethics of nursing profession, the human rights and legal issues related to Yemen community	▪ Classroom discussions, ▪ Problems solving	▪ Presentations ▪ Case Studies ▪ Learning activities

		▪ Case study analysis	

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction	▪ The practice of nursing - History of nursing occupation - Characteristics of nursing occupation - Ethics of nursing occupation - Duties and responsibilities of nursing - Laws of practicing nursing occupation ▪ Main Definitions: - Ethics, Bioethics, Moral, Morality, and Moral dilemma	2	2	a1, b1, d1
2	The caring relationship.	▪ Models of relationship ▪ Nurse-patient relationship ▪ Doctor-patient relationship	1	1	a1, b1, c1, d1
3	Values and value-statement	▪ Professional values: - Value, Beliefs an Attitude ▪ Professional Values in community health	1	1	a1, b1, d1
4	Theories and principles of ethics	▪ Theories: - Utilitarian. - Deontologic. ▪ Principles: - Autonomy. - Beneficence. - Confidentiality. - Fidelity. - Justice. - Non maleficence. - Paternalism. - Veracity.	1	1	a1, b1, d1
5	Patient Rights	▪ Human rights ▪ Patient rights	1	1	a1, b1, d1

		▪ Childbearing Women ▪ Reproductive Rights			
6		Midterm exam	1	1	a1, b1, c1, d1
7	Types of ethical problems	▪ Confidentiality. ▪ Trust issues. ▪ Refusing care ▪ End of life issues. ▪ Advance Directives ▪ Informed Consent	2	2	a2, b2, d2
8	Ethical and legal Issues	▪ Legal aspects of maternity and perinatal care ▪ Ethical and legal considerations prior to conception - Artificial Insemination - In Vitro fertilization and embryo transfer - Surrogate Mothers - Amniocentesis (Screening and the perfect baby)	2	2	a2, b2, d2
9	Ethical and legal considerations	▪ Ethical and legal considerations in abortion ▪ Ethical and legal considerations for the fetus and sick neonate - The Fetus - Fetal Research - Fetal Therapy ▪ The Neonate and effects of invasive procedures ▪ Ethical issues in research ▪ Ethical issues between nurses and physicians: ▪ Disagreements about the proposed medical regimen. ▪ Unprofessional, incompetent, unethical or illegal physician practice.	3	3	a2, b2, c2, d2
10		Final exam	1	1	a2, b2, c2, d2
Number of Weeks /and Units Per Semester					

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1:** Ethical and moral dilemma	W5	**5**	a1, c1
2	**Assignment 2:** Ethical issues in research	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example
2- Essential References:
3- Electronic Materials and Web Sites etc.:
Websites: ▪

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

REPUBLIC OF YEMEN
Ministry of Technical Education
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Higher Council of Community Colleges
Executive Board

الجمهورية اليمنية
وزارة التعليم الفني والتدريب المهني
المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Communication Skill**			
2	**Course Code & Number:**				
3	**Credit Hours**	**Theory Hours**	**Credit Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		2	2	--	--
4	**Study Level/ Semester at which this Course is offered:**				
5	**Pre –Requisite (if any):**				
6	**Co –Requisite (if any):**				
7	**Program (s) in which the Course is Offered:**				
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester Based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**				
12	**Prepared by:**				
13	**Date of Approval:**				

II. Course Description:

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs** (مخرجات تعلم البرنامج)	
Y. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Identify process, levels, barriers and strategies of communication and techniques of effective communication		
a2	Recognize the characteristics of verbal and nonverbal communication, levels of communication, barriers to effective communication and communication blokes		
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	Differentiate between therapeutic and non-therapeutic communication		
b2	Integrate ethical principles and concepts with nursing practice as a foundation for decision-making		
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Applies techniques of effective communication		
c2	Communicate with clients with impaired hearing, speech, or cognition		
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Establish effective inter-personal relations with patients, families & co-workers		
d2	Describe the elements of collaborative professional communication		

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Identify process, levels, barriers and strategies of communication and techniques of effective communication	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations

a2	Recognize the characteristics of verbal and nonverbal communication, levels of communication, barriers to effective communication and communication blokes	▪ Interactive lecture ▪ Seminars and student presentations ▪ Brain storming, role-play and simulation ▪ Small group for discussing	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam ▪ Presentations
	(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Differentiate between therapeutic and non-therapeutic communication	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
b2	Integrate ethical principles and concepts with nursing practice as a foundation for decision-making	▪ Interactive lecture ▪ Brain storming ▪ Role-play & simulation ▪ Small group discussions ▪ Seminars and student presentations	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
	(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Applies techniques of effective communication	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
c2	Communicate with clients with impaired hearing, speech, or cognition	▪ Active learning, ▪ Small group learning. ▪ Learning tasks and activities	▪ Assignments ▪ Quizzes ▪ Mid-term Exam ▪ Final exam
	(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:		
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**

d1	Establish effective inter-personal relations with patients, families & co-workers	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities
d2	Describe the elements of collaborative professional communication	▪ Classroom discussions, ▪ Problems solving ▪ Case study analysis	▪ Presentations ▪ Case Studies ▪ Learning activities

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Review of Communication Process	▪ Definition; ▪ Elements of communication ▪ Factors that influence the communication process ▪ Barriers of communication	1	2	a1, b1, d1
2	Levels of communication.	▪ Basic levels of communication. ✓ Interpersonal ✓ Intrapersonal Communication ✓ Group Communication ▪ Space in communication ✓ Intimate space ✓ Personal space ✓ Public space	2	2	a1, b1, c1, d1
3	Types of communication	▪ Types of communication ▪ Verbal communication ▪ Non-verbal communication ▪ Characteristics ▪ Listening & hearing	2	4	a1, b1, c1, d1
4	Therapeutic and non therapeutic communication.	▪ Therapeutic communication ✓ Elements ✓ Principles of therapeutic interaction ✓ Barriers ✓ Traits of Therapeutic Communication ▪ Non-therapeutic communication	2	4	a1, b1, c1, d1

5		Midterm exam	1	2	a1, b1, c1, d1
6	Communication blokes	▪ Communication blokes	1	2	a2, b2, c2, d2
7	Effective Communication	▪ Introduction ▪ Importance ▪ Principles ▪ Basic abilities for effective communication ▪ Barriers to effective communication	2	4	a2, b2, c2, d2
8	Collaborative professional communication	Collaborative professional communication	1	2	a2, b2, c2, d2
9	Communicate with clients with impaired hearing, speech, or cognition.	Communicate with clients with: ▪ Impaired hearing, ▪ Impaired speech, ▪ Impaired cognition.	2	4	a2, b2, c2, d2
10		Final exam	1	2	a2, b2, c2, d2
Number of Weeks /and Units Per Semester					

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion
- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1:** Therapeutic and non-therapeutic communication	W5	**5**	a1, c1
2	**Assignment 2:** communication blocks	W11	5	a2, b2, c2
Total			**10**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	W5,11	10	10%	a1, b1, a2, b2, c2,
2	**Quizzes 1 & 2**	W3, 9	10	10%	a1, a2, b1, b2
3	**Mid-Term Theoretical Exam**	W7	20	20%	a1, b1, c1, d1
4	**Final Theoretical Exam**	W16	60	60%	a2, b2, c2, d2
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

2- Essential References:

3- Electronic Materials and Web Sites etc.:

Websites:

-

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي

1	**Class Attendance:**

	Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
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6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

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المجلس الأعلى لكليات المجتمع
الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**Biopharmaceutics & Pharmacokinetics**			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3 hr	2hr	-	1hr
4	**Study Level/ Semester at which this Course is offered:**	3rd year / 1st semester			
5	**Pre –Requisite (if any):**	None			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:** **مكان تدريس المقرر**	Faculty : كلية.....			
12	**Prepared by:**	وزارة التعليم الفني والتدريب المهني			
13	**Date of Approval:**	2021-2022			

II. Course Description: وصف المساق

. This course is devoted to the exploration and examination of the physical and physicochemical behavior of drugs, dosage forms, and drug delivery systems in physiological milieu and their implications for pharmaceutical care. Drug absorption processes, bioavailability, and bioequivalence will be highlighted. Pharmacokinetic and Pharmacodynamic concepts, including absorption kinetics, volume of distribution, and compartmental models, will be introduced to the student.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		Referenced PILOs (مخرجات تعلم البرنامج)	
Z. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1.1	**Students will Acquire:** Understand the compartmental modeling and it's significance and understand drug absorption, distribution and elimination	**A1**	**A1**
a1.2	Understand drug clearance including (total, renal and hepatic clearance) and understand pharmacokinetics and biopharmaceutics after I.V bolus, I.V infusion, and oral administration of drugs.	**A2**	**A2**
a1.3	Understand protein binding and its effects and understand bioavailability and bioequivalence	**A3**	**A3**
a1.4	Understand Multiple dosage regimen and Have a knowledge on biopharmaceutics considerations in dosage form design	**A4**	**A4**
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1.1	**Students will Able to:** Able to analyze and scientifically use equations, which will help him, understand the processes that the drug undergoes inside the system and the fate of this drug.	**B1**	B1
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Nono	**C1**	
c2		**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d 4.1	Communication, Scientific research skills by using modern technologies	**D1**	**D1**
d 4.2	Work in team, and have skills in solving problems and work smoothly in-group and under stress.	**D2**	**D2**

IV. Course Contents:

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	**Students will Acquire:** Understand the compartmental modeling and it's significance and understand drug absorption, distribution and elimination	▪ Lectures ▪ Assignments and case studies ▪ Discussion	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and Final exams
a2	Understand drug clearance including (total, renal and hepatic clearance) and understand pharmacokinetics and biopharmaceutics after I.V bolus, I.V infusion, and oral administration of drugs.	▪ Lectures ▪ Assignments and case studies ▪ Discussion	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and Final exams
	Understand protein binding and its effects and understand bioavailability and bioequivalence	▪ Lectures ▪ Assignments and case studies ▪ Discussion	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and Final exams
	Understand Multiple dosage regimen and Have a knowledge on biopharmaceutics considerations in dosage form design	▪ Lectures ▪ Assignments and case studies ▪ Discussion	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and Final exams

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	**Students will Able to:** Able to analyze and scientifically use equations, which will help him, understand the processes that the drug undergoes inside the system and the fate of this drug.	▪ Lectures ▪ Solve Exercises ▪ Discussions.	▪ Class participation ▪ Test ▪ Quizzes ▪ Midterms and Final exams

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	None		

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

A. Theoretical Aspect:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Communication, Scientific research skills by using modern technologies	▪ Assignment ▪ Exercises ▪ Focus Group	▪ Presentations ▪ Evaluation
d2	Work in team, and have skills in solving problems and work smoothly in-group and under stress.	▪ Assignment ▪ Exercises ▪ Focus Group	▪ Presentations ▪ Evaluation

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1		Mathematical fundamentals in pharmacokinetics	**1**	**2**	**a1.1-d1.1-d4.1**
2		Review of rates and orders of reactions: 1st order and 2nd order: practice problems	**2**	**2**	**a1.1-d1.1-d4.1**
3	One-Compartment mathematical open model	One-Compartment mathematical open model: intravenous bolus administration:	**3**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**
4	One-Compartment mathematical open model:	Elimination rate constant, apparent volume of distribution, clearance, area under the curve	**4**	**2**	**a1.2- a1.3-b1.1- b1.2--d1.1- d4.1**
5	One-Compartment mathematical open model:	calculation from plasma data, practice problems	**5**	**2**	**a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1**
6	Multi – compartment model	Multi-Compartment model: intravenous bolus administration: Two-compartment model: Pharmacokinetics parameters: half-life, rate constants,	**6**	**2**	**a1.1-d1.1-d4.1**
7	Multi compartment model	Volum eof distribution, area under the curve, practice problems	**7**	**2**	**a1.1-d1.1-d4.1**
8	**exam**		**8**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**
9	Drug elimination and clearance	1) Renal drug excretion i) Determination of renal clearance	**9**	**2**	**a1.2- a1.3-b1.1- b1.2--d1.1- d4.1**
10	Drug elimination and clearance	2) Drug clearance ii) Determination of hepatic clearance	**10**	**2**	**a1.1-a1.2-a1.3- b1.1-b1.2--d1.1-d4.1**
11	Drug elimination and clearance	Practice problems	**11**	**2**	**a1.1-d1.1-d4.1**
12	Multiple dosing regimen	Drug accumulation, repetitive IV injection, loading dose, scheduling of dosage regimen	**12**	**2**	**a1.1-d1.1-d4.1**
13	Multiple dosing	Practice problems Revision and second examination	**13**	**2**	**a1.2- a1.3-b1.1-b1.2--d1.1- d4.1**

14	Bioavailability and bioequivalence	relative and absolute bioavailability, methods of assessing bioavailability, short overview of bioequivalence studies,	**14**	**2**	**a1.2- a1.3- b1.1- b1.2-- d1.1- d4.1**
15	Bioavailability and bioequivalence	practice problems	**15**	**2**	**a1.1-a1.2- a1.3- b1.1- b1.2--d1.1- d4.1**
16		**Final exam**	**16**	**2**	**a1.1-d1.1- d4.1**
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Weight variation test for tablet	**1**	**2**	**d1.1- d4.1**
2	Weight variation test for capsule	**2**	**2**	**d1.1- d4.1**
3	Volume variation of solution	**3**	**2**	**- d1.1- d4.1**
4	Identification of content of tablet	**4**	**2**	**c1.1-c1.2- d1.1- d4.1**
5	Identification of content of capsule	**5**	**2**	**c1.1-c1.2- d1.1- d4.1**
6	Calibration factor of salicylic acid with Hcl	**6**	**2**	**d1.1- d4.1**
7	Calibration factor of salicylic acid with water	**7**	**2**	**c1.1-c1.2- d1.1- d4.1**
8	**Midterm exam**	**8**	**2**	**d1.1- d4.1**
9	In vitro dissolution release test medium dis. water	**9**	**2**	**c1.1-c1.2- d1.1- d4.1**

10	In vitro dissolution release test medium dis. Hcl	**10**	**2**	d1.1- d4.1
11	Dissolution test for capsule	**11**	**2**	d1.1- d4.1
12	Diffusion test of semi-solid (olieaginous base) Diffusion test of semi-solid (water soluble base)	**12**	**2**	d1.1- d4.1
13	Disintegration test (uncoated –coated –enteric)	**13**	**2**	d1.1- d4.1
14	Disintegration test (capsule)	**14**	**2**	d1.1- d4.1
15	**Final exam**	**15**	**2**	d1.1- d4.1
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Number of Weeks /and Units Per Semester	14	28	

V. Teaching Strategies of the Course:

(a) Lectures
(c) Exercises solving
(d) Collaborative learning / pair work / group work
(e) Assignments
(i) Home work and Report
(j) Office Hours

VI. Assessment Methods of the Course:

54-	Participation& semester work
55-	Midterm exam
56-	Practical exam
57-	Quizzes
58-	Workbook Assignments

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Homework Assignments	1-15	60	a2.1,a3.1,a3.2,a3.3,a3.4
2	**Group Assignment.**	4, 8, 12	40	b2.1,b2.2,b2.3
Total			**100**	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	1-15	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,b2.1,b2.2,b2.3, ,d3.1,d1.1,d2.1
2	Midterm Exam	8	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,d3.1,d1.1,d2.1
3	Lab Midterm Exam	8	10	10%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3
4	Lab Final Exam	15	20	20%	
5	Final Exam	16	30	30%	a2.1,a3.1,a3.2,a3.3,a3.4, b2.1,b2.2,b2.3

6	Assignments	1-15	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,b2.1,b2.2,b2.3, ,d3.1,d1.1,d2.1
7	Midterm Exam	8	20	20%	a2.1,a3.1,a3.2,a3.3,a3.4,d3.1,d1.1,d2.1
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

1-Applied Biopharmaceutics and Pharmacokinetics.,Shargel and A.B.C. Yu., Appleton&Lange/MacGraw-Hill, New York., 4th edition 1999. ISBN 0-8385-0129-X
2-Shargel and A.B.C. Yu. Applied Biopharmaceutics and Pharmacokinetics, 5th edition 2004.Appleton & Lange/MacGraw-Hill, New York. ISBN 0-8385-0129-X

2- Essential References:

1-Merck Index: An Encyclopedia of Chemicals, Drugs, & Biologicals by Merck, Co, Maryadele J. Oneil (Editor), Ann Smith (Editor) 13th edition (October 2001), Merck & Co; ISBN: 0911910131
2-Pharmacy: Physical Chemical Principles in the Pharmaceutical Sciences by Alfred Martin, Pilar Bustamante, A.H.C. Chun (Illustrator) 622 pages 4th edition (January 15, 1993), Lea &Febiger; ISBN: 0812114388

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.

6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.

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الجهاز التنفيذي

I. Course Identification and General Information:

1	**Course Title:**	**pharmacology lV**			
2	**Course Code & Number:**				
3	**Credit Hours:3hr**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3hr	2hr	---	2hr
4	**Study Level/ Semester at which this Course is offered:**	3rd year / 1st semester			
5	**Pre –Requisite (if any):**	pharmacology l , ll & lll			
6	**Co –Requisite (if any):**	No found			
7	**Program (s) in which the Course is Offered:**	Diploma degree of pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Full time			
11	**Location of Teaching the Course:**	كلية الآفاق للعلوم الطبية والتقنية Class			
12	**Prepared by:**	كلية الآفاق للعلوم الطبية والتقنية			
13	**Date of Approval:**	2021-2022			

II. Course Description:

Providing the student with the knowledge and understanding about chemotherapy.

1- Define and describe the antifungal drugs.
2- Explain the action and indication chemotherapeutics agents.
3- Classify antibiotics.
4- Enumerate the anti-malarial agents.
5- Explain the chemotherapy of tuberculosis.
7- Define the antiviral, Anthelmintics and antiprotozoal drugs.
8- Classify anticancer drugs and describe its adverse effects.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)		**Referenced PILOs (مخرجات تعلم البرنامج)**	
AA. Knowledge and Understanding: Upon successful completion of the course, students will be able to:			
a1	Define the antibiotics. Antifungal, and antiviral,	**A1**	Recognize the side effects of various drugs antibiotics.

	Anthelmintic and antiprotozoal, anticancer drugs		Antifungal, and antiviral, Anthelmintic and antiprotozoal, anticancer drugs.
a2	Identify action and indication of the drugs	**A2**	Explain Mechanism of action of
B. Intellectual Skills: Upon successful completion of the course, students will be able to:			
b1	list precaution to be taken for each drug.	**B1**	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease
b2	Deal with patient when side effect occurred.	**B2**	
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Perform some experiments in pharmacology.	**C1**	
c2	The ability to interact with experimental animals	**C2**	
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Present scientific topics in seminar.	**D1**	
d2	work as team.	**D2**	

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
a1	Define the antibiotics. Antifungal, and antiviral, Anthelmintic and antiprotozoal, anticancer drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam
a2	Identify action and indication of the drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam
	Recognize the side effects of various drugs .	Lectures Group discussion.	Quiz Mid-term exam Final term exam

	Explain Mechanism of action of antibiotics. Antifungal, and antiviral, Anthelmintic and antiprotozoal, anticancer drugs	Lectures Group discussion.	Quiz Mid-term exam Final term exam

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
b1	list precaution to be taken for each drug.	Lectures Group discussion.	Written test Oral exam
b2	Deal with patient when side effect occurred.	Lectures Group discussion.	Written test Oral exam
	Able to determine any drug interaction which occur between drug-drug ,drug-food, drug-disease	Lectures Group discussion.	Written test Oral exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Perform some experiments in pharmacology.	Practical	Practical exam
c2	The ability to interact with experimental animals	Practical	Practical exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Present scientific topics in seminar.	Seminar Group discussion.	Mid-term exam Final term exam
d2	work as team.	Seminar Group discussion.	Mid-term exam Final term exam

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction**	• General principles of chemotherapy. • Classification of antimicrobial agents.	1	2	
2	**Antimicrobials**	• Inhibitors of cell wall synthesis - Penicillin - Cephalosporin	2	2	
3		• Follow up: - Cephalosporin. - Carbapenems. - Monobactams. - B- lactamase inhibitors.	3	2	
4		• Protein synthesis inhibitors - Macrolides. - Clindamycin. - Chloramphenicol.	4	2	
5		- Tetracycline. - Amino glycosides &Spectinomycines.	5	2	
6		• Folate antagonists - Inhibitors of folate synthesis (sulfonamides) - Inhibitors of folate reduction. - (trimethoprim).	6	2	
7		**Midterm exam**	7	2	
8		• Quinolones - Quinolones. - Fluroquinolones.	8	2	
9		• Urinary tract antiseptics.. • Chemotherapy of tuberculosis. • Chemotherapy of leprosy.	9	2	
10	**Anti-protozoal agents**	• Leishmaniasis. • Trypanosomiasis. • Toxoplasmosis.	10	2	

		• Giardiasis and amoebisis.			
11	**Anti -fungal agents.**	• Drugs for subcutaneous and systemic mycoses. • Drugs for superficial mycoses.	11	2	
12	**Antiviral agents.**	• Antiviral drugs for respiratory virus infection. • Antiviral drugs for herpes and cytomegalovirus infection. • Antiviral drugs for human immunodeficiency virus (HIV) infection. • Antiviral drugs for hepatitis Antiviral drugs for leukemia.	12	2	
13	**Anti- malarial agents**	• Life cycle of malarial parasite. • Tissue schizonticides. • Blood schizonticides Blood schizonticides and sporonticide.	13	2	
14	**Anthelmintic drugs.**	• Chemotherapy of Nematiodes • Chemotherapy of Trematodes. • Chemotherapy of Cestodes.	14	2	
15	**Chemotherapy of cancer and immunosuppressant drugs**	• Principles of cancer chemotherapy. • Adverse effects of anticancer drugs. • Anticancer drugs - Anti-metabolites. - Antibiotics. - Alkylating agents. - Microtubule inhibitors. - Steroid hormones and their antagonists. • Others - Cisplatin. - Etoposide. - Procarbazines. - Asparaginase.	15	2	

		- Interferons.			
16		**Final exam**	16		
Number of Weeks /and Units Per Semester					

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Study the effect of analgesic by chemical methods	**1**	2	
2	Study of action of anti-depressant on mice	**2**	2	
3	Study of anortic and locomotors activity of amphetamine and fenffurine	**3**	2	
4	Common laboratory techniques of anesthetics for animals studies	**4**	2	
5	Study the analgesic effect of morphine on animals studies	**5**	2	
6	Sensitivity of penicillin	**6**	2	
7	**Midterm exam**	**7**	2	
8		**8**	2	
9		**9**	2	
10		**10**	2	
11		**11**	2	
12		**12**	2	
13		**13**	2	
14		**14**	2	
15	**Final exam**	**15**	2	
Number of Weeks /and Units Per Semester		15	30	

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

1- lecture.
2- Discussion in groups.
3- Researching in groups for different topics as assignments.
4-Seminar Group discussion.

VI. Assessment Methods of the Course:

1- Participation& semester work	to assess intellectual skills
2- Mid-term exam	to assess the knowledge & understanding
3-Final term exam	to assess the knowledge & understanding
4- Practical exam	to assess the practical skills.

5- Quizzes	to assess the knowledge & understanding
6- Workbook Assignments	to assess the general and transferable skills.

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1				
2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Semester work		10	10%	
2	Mid-Term Examination		20	20%	
3	Practical Examination		30	30%	
4	Final-term Examination		40	40%	
Total			**100**	**100%**	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

7.

2- Essential References:

10.

3- Electronic Materials and Web Sites etc.:

Websites:

- An Online Medical Dictionary

X. Course Policies: (Based on the Uniform Students' By law (2007)	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' By law (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The Collage official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the section and Collage Administration.