

## COURSE OUTLINE FALL 2024

C :	
C C :	H100
T & L :	O : 8 9 . . E /5-6 . .
C C :	D . DO .D., M. .
I /T	D . DO .D., M. .
A :	
E :	@
ZOOM L :	:// - . /4301051742
O H :	B
O L :	O

E :

	PERCENT	TEST DATE / DUE DATE
P	10%	O -G
M Q	10%	16
A	10%	C
M T	30%	O 17, 2024
F E	40%	D 5, 2024

P

**Course Description:**

4056,1'1&5!+=4 2BCC@!,6! (/O.##D<.#: ,/E!BFDG##H!,%/ .1 : )</1.5!<1) .6#!/O (/!G,"! ; .1- , : #!6/ ) : #%/6!G,/O!  
(!61' , : !<1.#!11) % : (/ ,1%!,%!\* (6,<! (% : ! ( ; ; , # : ! ; 056,1'1&5!J0#!<1) .6#!G,"!#3 ; 0(6,K#!<',%,<(!  
; 056,1'1&5!,%<' ) : ,%&! 3#<0(%,6 36!\*5!G0,<0!<#'6! (% : !/,66) #6!1!//O#! \* 1 : 5!1 ; #. (/#!//1! 3 (,%/ (%!  
01 3 #16/(6,6E! (% : !/O#!,%/#&. (/ , -#!!) %</ ,1%6!1!//O#! 3 (L1. !656/# 36!1!//O#!0) 3 (%! \* 1 : 5!,%#0# (/O! (% : !  
: ,6#(6#A!  
!  
J0#! ( ; ; , < (/ ,1%!1! ; 056,1'1&5!!) % : ( 3#%/ ('6!//1!% (/) .1 ; (/O,<! 3# : ,<,%#!,6!,%/#&. (/# : !/O.1) &01) //O#!  
<1) .6#E! ; .1- , : ,%&!6/ ) : #%/6!G,/O! (!) % ,M) #!1 ; ; 1./) % ,/5!//1!# ( .% ! ; 056,1'1&5!G,/O,%!//O#!<1%/#N!1!  
% (/) .1 ; (/O,<! 3# : ,<,%#A!

**Course Outcomes:**

**On completion of the course the student will be expect to:**

- "# 3 1%6/ . (/#!H%1G'# : &#!1!1! .& (%!656/# 36!!) %</ ,1%!  
0! "# 3 1%6/ . (/#!H%1G'# : &#!1!1!<#')' (.!!) %</ ,1%!  
0! "# 3 1%6/ . (/#!O#! ( \* , /5!//1!,%/#&. (/#! ; 056,1'1&5!.1 3!//O#!<#')' (.!(% : ! 3 1'#<)' (.!#-#'/1!//O#!1.& (%!  
656/# 3!!  
0! ?!#</ , -# '5! .# ( : ! (% : !<1 3 3) % ,< (/#!6< ,#%/, ! ,<! ,%#1. 3 (/ ,1%!  
0! 8 ; ; '5!) % : #.6/ (% : ,%&!1! ; 056,1'1& ,< (! ; .1<#66#6!,%!/O#!<' ,% ,< (!'6#//,%&!  
!

**Pedagogy:**

J0#!<1) .6#!,6! : #' , -# .# : !,%! (!\*'%% : # : !'# ( .% ,%&!6/5#!G0,<0!<1 3 \* ,%#6!1% ,%#6#!'ID6/ ) : 5!3 1 : ) '#6!G,/O!  
G##H'5! , -# !,%/#. (</ , -#!1% ,%#!/) /1. , ('!6#66,1%6!.1 3 !>7CC!D!P! ; A 3 A! ? + J = 1%#!# - #% ,%&! ; # .!G##H@!G,/O!  
/O#!<1) .6#!,%6/ . ) </1. A!

**Evaluation:**

J0#! ; ( 66,%&!&. ( : #!,6!QCRE! (% : !#- (') (/ ,1%6\$ (66#66 3 #%/6!G,"!<1%6,6//1!1%#M) ,K! ; #. ! 3 1 : ) '#!  
=BCR@E! ; ( ./ , < ; (/ ,1%!=BCR @E!6#-# . (! ( 66,%& 3 #%/6!=BCR @E!1%#! 3 , : /# . 3 !/#6/=TCR @! / (H#%!1% ,%#E! (% : !  
(!!,% (!#N ( 3 !=FCR @! ,% - , &' (/# : !- , /) (''5!//O.1) &0! ? N ( 3 ,/5A!9! ,6!//O#!6/ ) : #%/6! .#6 ; 1%6 , \* , /5!//1! .#&,6/#.!  
!1.//O#! 3 , : /# . 3 !/#6! (% : !!,% (!#N ( 3 A!!  
!

**SPH100 – Physiology**  
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**Lecture Schedule**  
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W1:)'#6!

**SPH100 - Physiology  
Session Learning Outcomes**

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**Week 1**

*Deadline: Post a brief introduction on "Please introduce yourself" forum before the start of the tutorial.*

**Introduction to SPH100 Physiology Course**

^5!/0#!#% : !1!|/0,6!6#66,1%E!/0#!6/ ) : #%/!G, '! \* #! ( \* '#!/17!  
! [ (-, & (#/!W11 : '#!+42BCC!<1) .6#!60#"! (% : !Z1" ( \* 1. (/,- #!866,& 3 #%/! ; .1&. ( 36!  
! " ,6<)66! ; ' (& ( .,63!  
! \$% : #.6/ (% : !<1) .6#!.#M) ,.#3 #%/E!,%<' ) : ,%&!/#N/\*11H! .# ( : ,%&6E!#- (' ) (/ ,1%6! (% : !  
: # ( : ', % #6  
! ^#&, %!<13 ; '#/, 1%!1!|W1 : ) '#6!B!!

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**Week 2**

*Deadline: Complete Modules 1 and 2 before the start of the tutorial.*

**Module 1 and 2: Cells and Tissues, and Communication, Integration and Homeostasis**

^5!/0#!#% : !1!|/0,6!6#66,1%E!/0#!6/ ) : #%/!G, '! \* #! ( \* '#!/17!  
! [ ( 3#! (% : ! : #6<., \* #!/0#! 3 (L1.! \* 1 : 5!< (-, /, #6! (% : !<13 ; ( ./ 3 #%/6A!  
! ?N ; ' (%!/0#!|1) .!3 (L1.!|) %</, 1%6!1!|/0#!<#"! 3#3 \* . (%#A!  
! " . (G! (% : !' ( \* '#!/0#!|) , : !3 16 ( ,<3 1 : #!1!|/0#!<#"! 3#3 \* . (%#! (% : ! : #6<., \* #!/0#!  
|) %</, 1%6!1!|!# (<0!<13 ; 1%#%/A!  
! Z13 ; ( .#! (! ; 016 ; 01' , ; , : ! \* , ' (5# .! /1! (!3 , <# '#! (% : ! (! ; , ; 161 3 #A!  
! W ( ; !/0#!1.& (% , K (/ , 1%!1!| (!/5 ; , < (' (% , 3 ('<# 'A!  
! " . (GE! (% 3#E! (% : !' , 6!/0#!|) %</, 1%6!1!|1.& (% #' #6!|1) % : !, %! (% , 3 ('<# '6A!  
! Z13 ; ( .#/0#!6/.) </) .#6! (% : !|) %</, 1%6!1!|/0#!/0.##!| ( 3 , #6!1!|<5/1 ; ' (63 , <! ; .1/# , %!  
| , \* #. 6A!  
! Z13 ; ( .#! (% : !<1%/. (6!< , ' (! (% : !|' (&# ' (A!  
! "#6<., \* #!| , -#!3 (L1.!|) %</, 1%6!1!|/0#!<5/16H# #/1%A!  
! [ ( 3#!/0#!/0.##! 3 1/1.! ; .1/# , %6! (% : !#N ; ' (%!/0# , !|) %</, 1%6A!  
! "#6<., \* #!/0#!1.& (% , K (/ , 1%! (% : !|) %</, 1%6!1!|/0#!%) <#) 6A!  
! ?N ; ' (%!01G! ; .1/# , %!65%/0#6,6!) 6#6!<13 ; ( ./ 3 #%/ (/ , 1%!/1/16# ; ( . (/#! : , !|# .#%/16# ; 6!1!  
/0#! ; .1<#66A!  
! "#6<., \* #!/0#!6/.) </) .#! (% : !|) %</, 1%6!1!|N/ . (<# ' )' (.!3 (/ , NA!  
! "#6<., \* #!/0#!.1#!1!| ; .1/# , %6! , %!/0#!/0.##! 3 (L1.!< (/ #&1 , #6!1!|<#"!|) %</, 1%6A!  
! Z13 ; ( .#/0#!6/.) </) .#6! (% : !|) %</, 1%6!1!|/0#!|1) .! /, 66) #!/5 ; #6A!  
! "#6<., \* #!/0#! (% /1 35! (% : !|) %</, 1%6!1!|/0#!| , -#!|) %</, 1% ('< (/ #&1 , #6!1!|# ; /0# , (A!  
! Z13 ; ( .#/0#! (% /1 35! (% : !|) %</, 1%6!1!|/0#!6#-#%! 3 ( , %!< (/ #&1 , #6!1!|<1%#%</ , -#!  
/ , 66) #A!  
! \$#6!6/.) </) . ('! (% : !|) %</, 1% ('! : , !|# .#%<#6!/1! : , 6/ , %& ) , 60! \* #/G##%!/0#!/0.##! /5 ; #6!1!  
3) 6<# / , 66) #A!  
! "#6<., \* #!/0#!6/.) </) . ('! (% : !|) %</, 1% ('! : , !|# .#%<#6! \* #/G##%!/0#!/G1! /5 ; #6!1!|%) . ('!  
/ , 66) #A!  
! ?N ; ' (%!/0#! : , !|# .#%<#6! \* #/G##%! ( ; 1 ; /16,6! (% : !%#<.16,6A!  
! " , 6/ , %& ) , 60! \* #/G##%! ; ' ) . , ; 1/#%/E! 3) ' / , ; 1/#%/E! (% : !/1/ , ; 1/#%/16/#3!<# '6A!  
! c,6! (6!3 (%5!1.& (%6! (6!51)!< (%!|1.!# (<0!1!|/0#!BC! ; 056,1'1& , < ('!1.& (%!656/#36A!

! "#6<., \*#!/0.###!11. 36!1!!'1<('!<13 3)%,<(/,1%!(%:!/G1!!1. 36!1!!'1%&D:,6/(%<#!<13 3)%,<(/,1%A!

! ?N;'(%!/0#!&#%#.#('!6#M)#%<#!1!!#-#%/6!/0(/!1"1G!';1;0,'<!,&(%:!\*%,:%&!/1!%,/(<#')'(!.#<#;/1.6A!

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## Modules 4 and 5: Neurons: Cellular and Network Properties & The Central Nervous System

^5!/0#!#% : !1!/0,6!6#66,1%E!/0#!6/ ) : #%/!G, '!\*#! (\*'#!/1!

```
! W ( ; !/0#!1.& (%K(/,1%!1!/0#!%#.-1)6!656/#3!,%!: #/ ('A!  
! ". (G! (% : ! : #6<., *#!/0#!; (. /6!1! (!%#).1%! (% : !&,-#!/0#,.!!)%</,1%6A!  
! "#6<., *#!/0#!; (. /6!1! (!65% ( ; 6#! (% : !/0#,.!!)%</,1%6A!  
! [ ( 3#!/0#!/5; #6! (% : !!)%</,1%6!1!&', ('!<#'6A!  
! ?N;' (%!,%!G1.:6!01G!/0#! ` 1': 3 (%D21 : &H,%Da (/K!#M) (/ ,1%! .#' (/#6!/1!/0#!3#3*.(%#!
```



! "#6<., \*#!0#6/.)</).#!(%:!6#<.#/,1%6!1!0#!( :.##%('!3#:) "(A!  
! "#6<., \*#!0#6/.)</).#!1!0#!%#).13)6<)'(.!L)%</,1%A!  
! Z13 ; ( #!0#!(%(/135E!%#).1/.(%63,/#.6!(%:!.#<#;/1.6!1!0#!613(/,<!31/1.E!  
653 ; /0#/,<E!(%:!. ; (.653 ; /0#/,<!:-,6,1%6A!  
! ".(G!(%:!'(\*#!(16#.,#6!1!:. ,(&.(36!/1!601G!/0#!: ,ll#.##%/'#-#6!1!1.&(%K(/,1%1!  
6H##/'!3)6<#A!  
! ",(&.(3!/0#!6',:,%&!l,'(3##%!/0#1.5!1!<1%/. (</,1%A!  
! ",(&.(3!/0#!31'#<)'(.!#-##%/6!1!#N</(/,1%D<1%/. (</,1%<1) ; ',%&!(%:!/0#!<1%/. (</,#!  
<5<#A!  
! ",6<)66!/0#!: ,ll#.##%!/ ; 166, \*#!<()6#6!1!.!3)6<#!(/,&)#A!  
! ",6<)66!/0#!: ,ll#.##%<#6!\*#/G##%!6'1GD/G,/<0!l, \*#.6E!(6/D/G,/<0!1N, : (/,-#D&'5<1'5/,<!  
l,\*#.6E!(%:!!(6/D/G,/<0!&'5<1'5/,<!l,\*#.6A!  
! ?N;'(%!01G!3)6<#!'#%&/0!,%!)#%<#6!1. <#!1!<1%/. (</,1%A!  
D  
D  
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C  
D  
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! ",6/,%&),60!\*#/G##%!0#3 16/(6,6!(%:!<1(&)'(/,1%A!!  
!

! V .,/#!/O#!<O# 3,<('!.# (</,1%!1!.!/O#!<1%-#.6,1%!1!!Z \ Y!/1!2 Z \ T!d!E!,%<') :,%&!/O#!  
#%K53 #!/O (!<(/('5K#6!/O#!.# (</,1%A!!  
! W ( ;!/O#!. (%6; 1./!1!< ( \* 1%!: ,1N, : #!,%!( ./#., ('!(%: !-#%1)6!\*'11 : E!,%<') :,%&!/O#!  
#N<O (%&#6!1!!Z \ Y!\* #/G##%/O#!\*'11 : ! (%: !/O#! ('-#1',!1.!<#"6A!!  
! W ( ;!/O#!.#!'#N!<1%/ .1!1!!-#%/,' (/,1%!,%<') :,%&! ( ; ; . 1 ; ., (/#!%#) .1/. (%63 ,/#.6! (%: !/O#,.!  
.#<# ;/1.6A!!  
! ", (&. ( 3!/O#!<) ..#%!/ 3 1 : #'!1!.!/O#!\* . (%6/# 3!%#) . ('!%/G1.H6!/O (!<1%/ .1!\* .# (/O,%&A!!  
! ?N; ' (%!/O#! 3 #<O (%6 3 6! \*5!G0,<O!<#%/ . ('!(%: !; #.,; 0#. ('!<O# 3 1.#<# ;/1.6! 3 1%,/1.!  
Z \ Y! (%: !\ Y!'#-#6A!  
! " #6<., \* #!/O#!; .1/#<,-#!.#!'#N#6!/O (!&) ( . : !/O#!') %&6A!

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### Week 11 The Kidneys

^5!/O#!#% : !1!!/O,6!6#66,1%E!/O#!6/) : #%/!G,!'! \* #! ( \* '#!/17!

! c,6! (%: !: #6<., \* #!/O#!6,N!!) %<,1%6!1!!/O#!H, : %56A!!  
! J. (<#!/O#! (% (/1 3,<('!; (/O!1!! (!: . 1 ; !1!!G (/#.!! 1 3!^1G 3 (%6!< ( ; 6) '#!/1!) .,%#!'# (-,%&! /O#!\* 1 : 5A!!  
! J. (<#!/O#! (% (/1 3,<('!; (/O!1!! (!: . 1 ; !1!!\* '11 : !! 1 3!/O#!.#% ('! ./#.5!/1!/O#!.#% ('!-#,%A!!  
! ", (&. ( 3!/O#! (% (/1 3,<('!.# ('/1,60,; !\* #/G##%/O#!- (6<)' (! (%: !/) \* )' ( !.#' 3 #%/6!1!! /O#!%#; 0.1%A!!  
! " #6<., \* #!/O#!/O.##! ; .1<#66#6!1!!/O#!%#; 0.1%A!!  
! ", (&. ( 3!/O#!-1' ) 3 #! (%: !16 3 1' ( ./5!<O (%&#6!1!!,'. (/#! (6!,/!; (66#6!/O.1) &O!# (<O! 6#</,1%1!!/O#!%#; 0.1%A!!  
! " #6<., \* #!/O#!,/. (/1,%! \* ( ..#.6! \* #/G##%/O#!\*'11 : ! (%: !/O#!') 3 #%!1!!/O#!%#; 0.1%E! (%: ! #N; ' (%!01G!/O#5!< (%!\* #! 3 1 : ,!# : !/1!<1%/ .1!!,'. (/1,%A! " #6<., \* #!/O#!; .#66) .#6!/O (! ; .1 3 1/#! (%: !1 ; ; 16#!&'1 3 #.)' ( !,./' (/1,%A!!  
! "#1,%#!&'1 3 #.)' ( !,./' (/1,%! . (/#! (%: !&, -#! ( -#. (&#!- (')#6!1!.!` \_bA!!  
! ?N; ' (%!01G!` \_b!< (%!\* #!,%!) #%<# : !\*5!'1< ('!(%: !.#!'#N!<1%/ .1! 3 #<O (%6 3 6A!!  
! ", 6!,%&) ,60!\* #/G##%/! . (%6<#')' ( !./' (%6; 1./! (%: !; (. (<#')' ( !.; (/OG (56A!!  
! " #6<., \* #! (%: !&, -#!'#N ( 3 ; '#6!1!! (<,-#! (%: !; (66, -#!.# ( \*61.; /,1%,!/O#!; .1N, 3 (' /) \* )#A!!  
! \$6,%&!&'<16#! (6! (%!#N ( 3 ; '#E!<. # (/#!&. ( ; 06!/1!601G!!,'. (/1,%E!/. (%6; 1./! 3 (N, 3) 3 E! (%: !.#% ('!O.#601' : !1!! (!6) \*6/ (%<#!.# ( \*61. \* # : !\*5!; .1/#,%D 3 # : , (/# : !/. (%6; 1./A!!  
! ?N; ' (%! (%: !&, -#!'#N ( 3 ; '#6!1!!/O#!, 3 ; 1./ (%<#!1!!) \* )' ( !.16#<.#/,1%,%!.#% ('!)%</,1%A!!  
! ?N; ' (%! 3 (/O# 3 (/,<('5! (%: !,%!G1. : 6!/O#!.#' (/1,%60,; !\* #/G##%/O#!#N<.#/,1%1!! (! 61')#! (%: !,/6!.#% ('!<# ( . (%<#A!!  
! ?N; ' (%!01G!<# ( . (%<#!< (%!\* #!) 6# : ! (6! (%!,%: .#</!,%: < (/1.1!!.#% ('!O (%: !,%&!1!! (! 61')#A!!  
! ", (&. ( 3!/O#!,%-1') %/ (.5! 3,</) .,/,1%! .#!'#N!

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### Week 12 The Digestive System & Metabolism and Energy

^5!/O#!#% : !1!!/O,6!6#66,1%E!/O#!6/) : #%/!G,!'! \* #! ( \* '#!/17!

! J. (<#! (!; #<#!1!!) %: ,&#6/# : !!11 : !! 1 3! 3 1)/O!/1 (%) 6A!!

! ?N; '(,%!/0#!<0 ('#%&#6!1!()/1 :,&#6/,1%E! 3 (66!\* ('(%<#E!(%:!: #l#%6#A! "#6<., \*#!(%:!  
<13 ; (.#!6#<.#/,1%E! :,&#6/,1%E! (\*61.;/,1%E!(%: !3 1/,/5A!!  
! "#6<., \*#!6,%&'#D)%,/!6 3 11/0! 3 )6<'#E!6'1G!G (-#!; 1/#%/, ('6E!/1%,<!(%: !; 0(6,<!  
<1%/. (</,1%6A!!

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## Week 13

### Reproduction and Development & Review

^5!/0#!#% :!1!!/0,6!6#66,1%!/0#!6/) :#%/!G,!!\*#!(\*'#!/17!

```
! "#6<.,*#!/0#!.1#!1!6#N!<0.1 3 161 3 #6!,%!6#N! :#/#. 3,%(/,1%A!!
! "#6<.,*#!/0#!*,;1/#%/,('!.#;.1:)</,-#!6/.)</).#6!1!0#!#('5!# 3 *.51A!!
! ",(&.( 3!/0#!;.1<#66#6!1!6#N)('!.!#.#%/,(/,1%!,%! 3 ('!(%:!# 3 ('#!# 3 *.51%,<!
: #-#'1; 3#%/A!!
! "#6<.,*#!(% :!<1 3 ;(.#! 3 ('!(%:!# 3 ('!; (/#.%6!1!&( 3 #/1&#%#6,6A!!
! ",(&.( 3!/0#!<1 3 3 1%!01. 3 1%('!<1%/ .1! (%:!# #: * (<H!; (/OG (56!1!.!.#;.1:)</,-#!
l)%</,1%A!!
! ?N;'(%!/0#!6,&%,l,<(%<#!1!;)'6(/,'#!`%b 2!6#<.#/,1%A
```