

COURSE OUTLINE FALL 2024

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|----------|------------------------|
| 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.#!!1) %: (/ ,1%!,%!* (6,<! (% : ! (; ; ',# : ! ; 056,1'1&5!J0#!<1) .6#!G,"!# 3 ; 0(6,K#!<',%,<(!
; 056,1'1&5!,%<') : ,%&! 3 #<0(%,6 3 6! * 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/# 3 6!1!//O#!0) 3 (%! * 1 : 5!,%#0# ('/O! (% : !
: ,6#(6##!
!
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 # : ,,%##!

Course Outcomes:

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

- "# 3 1%6/. (/#!H%1G'# : &#!1!1.& (%!656/# 3 6!!)%</,1%!
0! "# 3 1%6/. (/#!H%1G'# : &#!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% ,%#16#!D6/) : 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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**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#!11) .!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!11) % : !, %! (% , 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!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!11.<#!1!<1%/. (</,1%A!

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! ",6/,%&),60!*#/G###%!0#3 16/(6,6!(%:!<1(&)'(/,1%A!!
!

! V .,/#!/0#!<0#3,<('!.#(</,1%!1!.!/0#!<1%-#.6,1%!1!!Z \ Y!/1!2Z \ T!d!E!,%<') :,%&!/0#!
#%K53##!/O(/!<(/('5K#6!/0#!.#(</,1%A!!
! W(;!/0#!.(%6;1./!1!<(. * 1%!: ,1N, : #!,%!(./#.,('!(%: !-#%1)6!*'11 : E!,%<') : ,%&!/0#!
#N<0(%!1!!Z \ Y!*#/#G##%/O#!*'11 : !(%: !/O#!(' -#1',!1.!<#"6A!!
! W(;!/0#!.#!#N!<1%/ .1!1!!-#%/,'(/,1%!,%<') :,%&! (; ; .1 ; ., (/#!%#) .1/. (%63,/#.6!(%: !/O#,.!
.#<# ;/1.6A!!
! ", (&. (3!/0#!<) ..#%/! 31 : #'!1!.!/0#!* . (%6/# 3!%#) . ('!%/G1.H6!/O(/!<1%/ .1!* .#(/O,%&A!!
! ?N;'(%!/O#!3#<0(%636!*5!G0,<O!<#%/.'!(%: !; #.,; 0#.(' !<0# 31.#<# ;/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!!/0,6!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!/0#! (% /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!/0#!-1') 3#!(%: !16 3 1' (./5!<0(%!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#<0(%636A!!
! ", 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) 3E! (%: !.#% ('!O.#601' : !1!! (!6) *6/ (%<#!.# (*61. *# : !*5! ; .1/#,%D 3# : , (/# : !/ . (%6 ; 1./A!!
! ?N;'(%! (%: !&, -#!#N (3 ; '#6!1!!/O#!, 3 ; 1./ (%<#!1!!) *)' (.!6#<.#, 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!/0#!,%-1')%/(.5! 3,</) ., /,1%!.#!#N!

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Week 12 The Digestive System & Metabolism and Energy

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

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

! ?N; '(,%!/0#!<0(''%!1!()/1 :,/,1%E! 3 (66!* ('(%<#E!(%:!: #l#%6#A! "#6<., *#!(%:!
<13 ; (.#!6#<.#/,1%E! :,/,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 : ) </, -#16/. ) </) .#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
```