

Terry Henkel, Humboldt University, sharing 3 Mycology-focused course ONLINE VIDEOS.

- I. Biology of Ascomycetes & Basidiomycetes-- Lecture & Lab Videos
 - II. Forest Pathology—Lecture Videos
 - III. Biology of Microfungi-- Lecture & Lab Videos
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I. BOT 359 Biology of Ascomycetes & Basidiomycetes (Spring 2021)

Zoom lecture links for lectures & labs

Course Introduction:

Topic: SYLLABUS INTRODUCTION BOT 359 Spring 2021

Start Time : Jan 18, 2021 02:52 PM

https://humboldtstate.zoom.us/rec/share/3ckogKYt7EC5h6u25jIb67qP5aavDKBt11ATUwlO-vMbdJOSmb8TkGkNwS_NIUXY.IRn47f1W38BiPDP

Lectures:

Topic: Lecture 1. Introduction to Fungi & Basidiomycota

Start Time : Jan 15, 2021 05:13 PM

https://humboldtstate.zoom.us/rec/share/HMroI53qIKg7fpVRJmi_iJlkDbKXhaG5d0idy-oIOpZvLsVcSU5rT6LZH6mcS7.bWCHeNuFbKdhRt3H

Topic: Lecture 2. Development, Form and Function of Basidiomata

Start Time : Jan 20, 2021 03:03 PM

https://humboldtstate.zoom.us/rec/share/ZJ0P_gM83qvDyQnJqwc2aH718ZcPFyma-adgJ0twut36CBItioMgXNGHd9SjPxdu.AAUXMnvv9Xjo-uKj

Topic: Lecture 2b. Ballistospory Video Discussion

Start Time : Jan 21, 2021 04:01 PM

<https://humboldtstate.zoom.us/rec/share/hfypaHuJWkxae849cnzQK91Hv93DrMzQG0v0z-wH0-Dng4vq5HHxvkUYUwXzunxsN.SytDdeBcxmIbWxpe>

Topic: Lecture 3. Sexual Reproduction and Mating Systems in Basidiomycota S21

Start Time : Jan 24, 2021 06:31 PM

https://humboldtstate.zoom.us/rec/share/LUV-Ug4HeWGRqOLOGLi6YZOotG_rhyrwON4ePvHIuWAOOr9q0EOEgqflTpfOsHxef.OtliSXBiyPP7ppMu

Topic: Lecture 4. Wood and Litter Decomposition

Date: Jan 31, 2021 04:10 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/SHMBOLDw4T6upj5R2hZlhWVV-VvmjDBwPFhrl3I_60q4n8cN-jqSTwov1GESZXY4.d80HUCwMv1z_Re4N

Topic: Lecture 5. Mycorrhizae

Start Time : Feb 7, 2021 10:49 AM

<https://humboldtstate.zoom.us/rec/share/FV5xN0HM9KuvbKD1TWhtRNJW-M8CLzP4moptOYR85iUtkdhOR0dO-gWyNVHX2bma.dKGGOMnNmxi03ESn>

Topic: Lecture 6. Ascomycota Introduction, Structure & Classification

Start Time : Feb 13, 2021 04:14 PM

https://humboldtstate.zoom.us/rec/share/jNN3jV8UN0RvfytnfUXkyVUiWXb4_bqmrw3OCITB06Nh-29ZwMKIsLqrNEoDqV-W.7WHojFLAZs9zKzhD

Topic: Lecture 7. Ascomycota - Sexual and Vegetative Compatibility Systems

Date: Feb 27, 2021 10:02 AM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/H9VaNgf_zn79sdlyogbBnarhhddOtLY5KM4RLfZfGkOfg21HwgPS4Uz5UUErYun0.ZLyVsTe6YicN61YE

Topic: Lecture 8. Lichens

Date: Mar 7, 2021 09:25 AM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/ngYj1RcsEuzflo8vhidkueZKfhx0hs6kIJBTDRAyl5QhdwiEMtb715hUJs1UWHus.z11Oc1CFEmA9V9qB>

Labs:

Topic: Lab 1. Agaricales, Russulales, Boletales

Start Time : Jan 19, 2021 02:54 PM

https://humboldtstate.zoom.us/rec/share/45gdnDq8UOB_VGlpWV4zGdX59v936ZSydjhUo2Pq06rgRd6JXEhbPez4F3MPyhjA.KyLqog-hztyR-09-

Topic: Lab 2. Aphylophoroid Fungi

Start Time : Jan 24, 2021 09:12 PM

https://humboldtstate.zoom.us/rec/share/cEionvy7T3G4D_ID1lcqvJAX-8XOCmGHkR3F-QZddc5peCtHzNRvrUSenaq4tNa.LvV4ERp-ze2bBxoz

Topic: Lab 3. Gasteroid Fungi

Date: Jan 30, 2021 02:43 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/FmSl4rO7rStnsl5ZEoid4e-izfNxA4F1i2iWnPF_xYDSI1RU60LRs0U4nJ6CnKtC.IMsaS9xa0fUgZvQU

Topic: Lab 4. Jelly Fungi & Rusts

Start Time : Feb 5, 2021 08:12 PM

https://humboldtstate.zoom.us/rec/share/Htcobcgw5Pm1pDBAwaYYASPcbG4j4teZ8gTY4PwCz4DHoxHjkYHE_rmrWzUx0N0p.6UjwnsTMWEkYOj8e

Topic: Lab 5. Archiascomycetes, Hemiascomycetes, Plectomycetes, Erysiphales

Date: Feb 14, 2021 12:32 PM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/Rd66TTk7NW03nOdui41nkaKUqbmP8W-btOidTJ5oY5bB-5LrtNpOODvVTI10nhoT.EIOW-ZJWPJO9XkLI>

Topic: Lab 6A. Pyrenomycetes and Loculosacomycetes

Date: Feb 27, 2021 11:02 AM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/58S60fYBZFJh9W8N5jOhcmq-upItODlaMWqwFZfcdLyfoqT8inSXmZqUza0y0mrO.rfHK0xu03-WG65JC>

Topic: Lab 6B. Pyrenomycetes and Loculoascomycetes

Date: Feb 27, 2021 01:17 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/bwrknGi34DpKAFXyIOwJffwIZKy_FJkLs1OZ1hAUBDp5sd9mrTs0TiW3qwP0LIOH.P1KF5s2EizupEDjs

Topic: Lab 7. Discomycetes

Date: Mar 5, 2021 06:07 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/9ctMnUNt6972NxDrLANHo4mfhe4R4ExO6ip5bW54_c8cWEIOIac_9jteV5hzmTx_A.DcxGGOWLp5dLbC0

Field Videos that accompany each lab above are available as individual video files.

II. **BOT 394 - Forest Pathology.** This course covers the biology, symptomatology and diagnosis of major fungal, bacterial, and mistletoe diseases of western trees. Field identification and diagnosis is the focus of the course, with emphasis on tree species and diseases in late successional and old growth forests in northwest California. The course consists of ~ 3 hours of lecture and ~ 3-6 hours of lab/field time per week.

DIRECTORY TO LECTURE AND LAB RECORDING ZOOM LINKS BOT 394 FALL 2020:

Topic: BOT 394 - COURSE INTRODUCTION

Date: Aug 22, 2020 12:32 PM Pacific Time (US and Canada)

Meeting Recording:

https://humboldtstate.zoom.us/rec/share/_ckkEer5_VtOGLPxt3rYeJMGOKW5aaa80XBN_ftbm_k9iMGVenUB6T8MukfJdffW?startTime=1598124940000

Topic: LECTURE 1 - INTRODUCTION BOT 394 F20

Start Time : Aug 23, 2020 02:34 PM

Meeting Recording:

https://humboldtstate.zoom.us/rec/share/4u91IJJa31k1LGY3qswKFXI47AKTIaaa8gyYZ_oLxE8hF4DYIXWKcktqqUCI9_5N

Topic: LECTURE 2 - DISEASE CYCLE & SYMPTOMATOLOGY

Date: Aug 29, 2020 12:40 PM Pacific Time (US and Canada)

Meeting Recording:

https://humboldtstate.zoom.us/rec/share/xOFCBu7r-GNIAbPi41jWZ6BmBo-8X6a81nRK_aYOxEe7z42ix_DONmhl_o0gV-qU

Topic: LECTURE 2 - DISEASE CYCLE & SYMPTOMATOLOGY

Date: Aug 29, 2020 12:40 PM Pacific Time (US and Canada)

Meeting Recording:

https://humboldtstate.zoom.us/rec/share/xOFCBu7r-GNIAbPi41jWZ6BmBo-8X6a81nRK_aYOxEe7z42ix_DONmhl_o0gV-qU

Topic: LECTURE 3a – DWARF MISTLETOE BIOLOGY

Date: Sep 6, 2020 12:40 PM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/tjeWDajNLQ-FrFwUVPG2alpvV7bWb3thRJ4CINvVQ7InQRcX7ys3ZNdlM7aDw5WY.ejc3S9VgxtuKN4BN?startTime=1599419022000>

Topic: LECTURE 3b – DWARF MISTLETOE LIFE CYCLE

Date: Sep 6, 2020 12:40 PM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/fiilb9-kykrG7mUx1gSHcT0ov7CHlfyplOII3GmgB3hxeePurpl8g5Z4S4rTic6d.w7ST1ZzA6h0v2iy?startTime=1599425698000>

Topic: LECTURE 3c – DWARF MISTLETOES OF OUR REGION

Date: Sep 6, 2020 2:40 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/_taYrs15K6CUWUvReRzjQYafUCXAJB6YJ9b0ecjmZ3K02IJqJvw1tplowVhl5p52.75MM7ZKWfFjIxQQd?startTime=1599585012000

Topic: LECTURE 3d – LEAFY MISTLETOES

Date: Sep 6, 2020 2:40 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/nKvISTqamwm7cXgTdbAi9b8hcZdoNW57rXbQpj9ZPtU_cgveg7hTkuBKg2P8XKaj.kKpfiSInHrQabWeC?startTime=1599431923000

Topic: LECTURE 4a – RUSTS INTRODUCTION

Date: Sep 20, 2020 11 am Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/rqIPJ6SzNnl6mvC32a5_RMKQBM8npMz1qoGdAZThuagvBnLSKntAxGriXUUKG6ma.kJbXI-RKyupPglwG?startTime=1600625031000

Topic: LECTURE 4b – IMPORTANT TREE RUSTS OF OUR REGION

Date: Sep 20, 2020 11 am Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/ITsO0bs_j4pFhCYcEn6Yu8QPJLWw6mRZ5L8gYgl5PZYKuIvQwoZ0mXb7n2M56OL.wDkpH5aCHYH6HLAE?startTime=1600631066000

Topic: LECTURE 5a - ROOT DISEASES I

Date: Oct 4, 2020 02:43 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/M-aJp3Ssjo5b-esh3Vo_V_7j70LOkqHR7osBLgQ3vHY0TTLf0niiiont-Vt2N6aLN.DM8IOcG_3QG1d2I5

Topic: LECTURE 5b - ROOT DISEASES II

Date: Oct 5, 2020 11:59 AM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/YH1WqZaOIphrzMZGg9IxxL0dvhPIIwqlTnLnqMAsZ7Ewr3r-4b5xrvzyd3ZZG2G.hFexw2GbrZsrtYIU>

Topic: LECTURE 6a - WOOD DECAY I

Date: Oct 15, 2020 10:35 AM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/atpUv0CJbjHYPzOJwwbm8pc7Beq7mCy5CTNi3gkLQiTf-OnizdxjUXPXeylBM9JR.CK0-c6PuRwkMH68R>

Topic: LECTURE 6b - WOOD DECAY II

Date: Oct 19, 2020 12:00 PM Pacific Time (US and Canada)

<https://humboldtstate.zoom.us/rec/share/hJ3jN0DtU4gACMEHGgxA78XLOkcRA1I6txB6jazqdi75kjZGGGD7n77yBf7FnEqL.BSpGSsCMo3gh0195>

Topic: LECTURE 7a - FOLIAGE DISEASES I

Date: Nov 5, 2020 06:56 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/sQ92-zIIf7f-wy_MZPVsIkUIHj5twFKsTIVRt4DV3M-hlM6ZEpJ2bhW6yLiK-fc1.fOQKvppS760bn2Kr

Topic: LECTURE 7b -FOLIAGE DISEASES II

Date: Nov 6, 2020 07:07 PM Pacific Time (US and Canada)

https://humboldtstate.zoom.us/rec/share/FuXfjLAu6q8AnMCGh8LEvYQzoVaO74_zPvlsgyTgwCyHKzkHNJ49Q1CS8Emb7fQ.f3b2MO5QsX7VVNni

Topic: LECTURE 8a - CANKERS & PROLIFERATIONS I

Start Time : Nov 13, 2020 06:26 PM

https://humboldtstate.zoom.us/rec/share/6C8t1-xpWcKdkKnZtD3DoqRxfYo-Hny16wZDZu_8-viOlxxOVckYjKuzmQLOTeg1.OWMix7zrxNYCNU7P

Topic: LECTURE 8b - CANKERS & PROLIFERATIONS II

Start Time : Nov 19, 2020 05:57 PM

https://humboldtstate.zoom.us/rec/share/AHUwcWZJV8J2sreRINLn5OCMXZveu5_f9-frEmolxp5PeScbJvcKbyKOxyhcqjiIi.FcfVb2-CtESYu28V

Topic: LECTURE 8c - CANKERS & PROLIFERATIONS III

Start Time : Nov 19, 2020 08:14 PM

https://humboldtstate.zoom.us/rec/share/pqhhTdAeo_xa3Yq_vcr1RdvUxdaGPOXv4lsbmQnB7e aoyEJ-KceSburKa_DjLaxw.3ImUtNEVo7jzAYCI

III. **BOT 358 - Biology of Microfungi.** This course covers life histories, systematics, ecology, genetics, and practical applications of the protistan fungi, including the major slime molds (Myxomycetes and Dictyosteliomycetes) and water molds (Oomycota), two major phyla of Kingdom Fungi, the Chytridiomycota, and Zygomycota., and asexual conidial fungi (predominantly Ascomycota). Labs focus on anatomy, morphology, and taxonomy of these organisms. 2 lectures, 2 labs/wk for 1/2 semester.

BOT 358 Biology of Microfungi Fall 2020 Lecture and Lab Recordings Zoom links

LECTURES:

Lecture 1 – Introduction to Microfungi Zoom Link:

<https://humboldtstate.zoom.us/rec/share/-vFMbJr20G5OYI3p-EfXPB-B777X6a80vMYrqcEnUmDNSpObKBGxIEUe6n7Ss4L?startTime=1598283392000>

Lecture 2 – Myxomycetes:

<https://humboldtstate.zoom.us/rec/share/utVWHYr0yk9JGYX39h NV7Q4IJ IX6a80XdLq KINnxlYbpoiJjobO1MJaiEDuj9G?startTime=1598289412000>

Lecture 3 – Dictyosteliomycetes zoom link:

<https://humboldtstate.zoom.us/rec/share/1NxXFbbX10NOGpHR61DCUYw4DpTiaaa8gHIZ aYEzR0gDWEool8kjJUkb9eaBo3F?startTime=1598888621000>

Lecture 4a – Oomycota

<https://humboldtstate.zoom.us/rec/share/pTJm7jiqB9pB42jOc4zZXj6jCsnPC7g2 vp2jJBxqTN O0Rk8ectmwZELYjDIZwN-.5fb81dL95ZPdgrG4?startTime=1599510563000>

Lecture 4b - Oomycota

<https://humboldtstate.zoom.us/rec/share/gcHjx 4I2Yogi-3O1gJmb4jcf9jtRf6q1OHaPncRRxmoBpxFDHefmMrH5zC-bB1x.YCaYaD6Z3OHcqSlf?startTime=1599516947000>

Lecture 5 – Chytridiomycota

<https://humboldtstate.zoom.us/rec/share/59vLCphDtFXyL6hbW-u3ZsmNel8rvklE6n3naA4z5BOaBUiZJ 1mt1d x1lpnfk4.RY cYEtAULUfDhrk?startTime=1600031336000>

Lecture 6 – Zygomycota s.l.:

<https://humboldtstate.zoom.us/rec/share/-cvfldHM53T6CnnhuhJ2vRbSaKZETxraNUxTrIcUSGldRiPtxPsgEg-DbwQ3S6B7.qXLs9U5qvxKVPa E>

Access Passcode: **9R=C24H@**

Lecture 7 – Conidial Fungi I

https://humboldtstate.zoom.us/rec/share/ssI0V5Fv3VuRdZ4gf9lO5e6PF1D2JPiuyIAUNYu-ddLgDr0bs9UV7IJ43_oVPMvb.PP1OjEbj8usrSkPI

Access Passcode: **6h%H*Y\$?**

Lecture 8 – Conidial Fungi II

<https://humboldtstate.zoom.us/rec/share/qKgnMXKMWeiksZe6MRc7FUcOB-9AEnynr5R02tGbhLZaxuYgl8tOWp5KAKirXOI8.rp2fzBCIrxvFLgOS>

Access Passcode: **5P*p#\$76**

LABS:

Lab 1 – Myxomycetes:

https://humboldtstate.zoom.us/rec/share/uZZNLuqu92xLU6_yynjfZukCDLyIX6a80SEf8vNbmXbitLo_GkVdE-K_ufKfD3E?startTime=1598297335000

Lab 2 Dictyosteliomycetes Zoom Link:

https://humboldtstate.zoom.us/rec/share/tMwpJLzbr1FOSc-O9XvOcOkNL6jAaaa8hHOe-aIEmEmvELhgO2UGyUXD2zO_I35x?startTime=1598900704000

Lab 3 – Oomycota lab slides Zoom link

https://humboldtstate.zoom.us/rec/share/Ww633kwTfJrOsnSXDjxy8aquYy6DOHS0RR06ubHLE-u4UGC0q_q9vAHu5KXPC8pO.mujc331yUqCYOYs9?startTime=1599591833000

Lab 4 – Chytridiomycota lab slides Zoom link

<https://humboldtstate.zoom.us/rec/share/rWuNJSSbPky68XqPeCkfMqbKJrmqlT9cKBWVBw0zZZOncBJe9oJ2-QKNVAbGy918.qFkLgd5HODNpI91V?startTime=1600109219000>

Lab 5 – Zygomycota lab slides Zoom link

Meeting Recording:

https://humboldtstate.zoom.us/rec/share/QIJbUkxvVHx0uLlqCD3eU9cLsBHmy1rY_mrPIo6tZv_g1u8vF15Q4-bO7DiGAlmd.Qm42YYNvwrYNFJpv

Access Passcode: **8o%735!%**

Lab 6 – Conidial Fungi I lab slides Zoom link

Meeting Recording:

<https://humboldtstate.zoom.us/rec/share/45xPyGvnEnflr4kgaZt3dXCjSFXKmtDAQNzdbSIYe0AoAY8HYIjIskufw3U Sj2.kr 5VNEXC5UkFXvC>

Access Passcode: **4Z*O5s5%**

Lab 7 – Conidial Fungi II lab slides Zoom link

<https://humboldtstate.zoom.us/rec/share/qq-XcfokWgtzh7y8wcuO0JkGoadhz3Pck2v26-Wm5o2vJUmm7P7 5OdAPets-Ymc.zvU QZZNVhhSYhwj>

Access Passcode: **9t@27C42**