Halmstad University
School of Business, Engineering and Science
Exercise Biomedicine

8.2 Uppsatsanvisningar (Course guide)

Course Guide

NGBIPh12
BM5001

Degree Project in Exercise Biomedicine
Examensarbete inom Biomedicin – fysisk träning 15 hp

2015

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Introduction

Welcome to your course!

Some important points to start with:

The course plan for the degree project in exercise biomedicine (examensarbete i Biomedicin, inriktning fysisk träning), with course code BM5001, can be found on Blackboard and online through: https://www.hh.se/utbildning/hittautbildning/kursplanermedlitteraturlistor.4677.html

To start your thesis you need 82.5 hp of course work completed in the biomedicine program. If you have less than that, we recommend that you use the spring semester to finish your previous courses so you have the required knowledge and competences to start your thesis work. After your presentation at the pre-examination seminar you will be given a strong recommendation from the examiner and supervisor to defend your thesis at the end of the spring semester or not. However, it is up to you as a student to decide at which examination opportunity (i.e. in May or August/September) you wish to defend your bachelor's thesis.

During your defense, the examiner will grade your thesis with U, G or VG (fail, pass, pass with distinction) according to the criteria set in 'Betygskriterier Biomedicin VT15' (see appendix 2 in this course guide). If the thesis is not ready to defend, the next opportunity to defend will be at the end of August/beginning of September. If your work receives the grade U (fail) you will be given two more hours of supervision (i.e. one read-through by the supervisor), and the right to defend the thesis one more time. If the thesis again receives a U (fail) after the second defense, a completely new thesis must be written and re-registration is required.

Compulsory parts for a bachelor's thesis:

1. A research proposal approved by both supervisor and examiner. The topic for your thesis needs be in the area of biomedicine / exercise biomedicine and the design should be experimental.
2. An ethical approval and informed consent form should be reviewed and approved by the departmental ethical committee before starting the project.
3. Submit thesis on Blackboard at the latest April 24 2015 for the pre-defense seminar, both as a Word document and as PDF.
4. Oral and written presentation and active participation/opposition in pre-examination seminar
5. Supervisor's recommendation for thesis defense. It is important to discuss the feasibility to defend at a set date with your supervisor.
6. Submit thesis on Blackboard and on SafeAssign (plagiarism control program) latest May 15 2015, both as a word document and as PDF.
7. Defend the thesis in person at Halmstad University.
8. Be an opponent for another bachelor thesis in person at Halmstad University.
9. Register the final version (after final approval by examiner) on DiVA and collect/distribute paper copies for administration, examiner and supervisor.

Supervision

Each thesis is assigned a senior lecturer from Halmstad University, or an affiliated person, as supervisor. If a thesis project is done in collaboration with a company, a contact person must be

assigned from the company. The final thesis topic is decided in collaboration between the student, the supervisor and the examiner. A student is not allowed to start a project without supervisor's approval. This is to ensure that all ethical guidelines are followed during a research study. The students writing their theses are required to keep a good contact with their supervisor and to follow the required steps (see under compulsory parts above). A supervisor has a total of 15 hours available for reading and commenting. These hours include the time needed for individual contact (personal or e-mail), group meetings and seminars, as well as time for reading and correcting. Use your allotted time wisely!

Most supervisors will schedule group meetings with all students that he/she supervises at the same time. These meetings are to ask questions, get help solving problems and also learn from your fellow students. The schedules for these meetings will be set by each supervisor and you will be informed of these later.

NOTE: Your allotted hours for supervision are only valid for a semester. After that they are considered used up and no supervisor can be expected to read your thesis anymore.

Pre-examination seminar

The pre-defense seminar is a final opportunity for the students to discuss their thesis work and its progress towards finishing the thesis. It is a formal presentation that each student must complete before defending a thesis, but it is also a seminar where all the fellow students are required to read everyone's work and comment on the work as well as participate in discussions.

During the pre-examination seminar each student will have 10 minutes to present her/his thesis project, including a plan of how the work will continue to reach the chosen thesis deadline. After your presentation at the pre-examination seminar you will be given a strong recommendation from the examiner and supervisor to defend your thesis at the end of the spring semester or not. Your thesis should be submitted on Blackboard at the latest 1 week before pre-examination date both as a Word document and as PDF. The students in your group will act as opponents at the pre-examination seminar and should provide you with a written copy of their opposition (your opponent will be assigned by your supervisor).

Costs

The use of facilities at the University, the use of approved equipment from the Human Performance Lab, disposables/paper copies not exceeding 1000 SEK, and the work of the supervisor is free for the students during the thesis semester. Other materials, travels, or other costs cannot be covered by Halmstad University. If you have suggestions for equipment that could be useful for the Human Performance Lab please discuss it with the lab supervisor and/or program director. Halmstad University will not reimburse costs to the student/thesis project not approved beforehand.

Thesis defense/Examination seminar

Students in the bachelor program (180 credits) in Exercise Biomedicine / Biomedicin - inriktning fysisk träning, are expected to defend their own thesis, act as an opponent for a fellow student and be able to clearly and scientifically answer related questions to their work as asked by the examiner in order to fulfill the requirements for a grade in their degree thesis project. Your thesis defense seminar is mandatory from 8am to 5pm.

1. The students defending their theses will first present the research during a 10 min long power point presentation, including background, method, results, discussion, and conclusion.
2. The general public have approx. 5 min to ask any general questions about the presentation.
3. The student opponent will have 10 min for a thorough opposition/critique of the research's merits and downfall (see opposition below).
4. The examiner will have approximately 10 min to ask questions and give comments on the work, and the student will be expected to answer the questions clearly and insightful.

Opposition

Each student must be an opponent on another student's defense. The main task of the opponent is to bring forward, and discuss merits and short comings in the thesis in a scientific, proper and respectful way. It is a time to discuss the thesis results and start a dialogue with the thesis respondent. For a guideline on how a scientific opposition is done, please follow the Opposition Critique Guidelines in appendix 1 below.

The opponent writes down their comments and hands them over to the respondent at the end of the opposition as well as e-mails them to the examiner at the latest the day before the opposition. They should be clear, logical, give page and paragraph references.

Thesis structure

A thesis is a critical analysis that answers a scientific question or hypothesis. You need to gather evidence - from various sources - to make interpretations and judgments. The approach/ methods should be carefully designed to come to closure. The results should be clearly defined and discussed in the context of the chosen topic. Relevant literature should be cited. The analysis should be placed in a broader context, and highlight the implications of the results. In a thesis, a well-reasoned line of arguments need to be included based on the research questions, including compilation of relevant evidence, setting data in a universal context, and finally making a judgment based on the analysis. A thesis should be clearly written and follow the format specifically outlined in the text*: Guidelines for writing a 15 credit bachelor's thesis in Exercise Biomedicine*. This guideline is posted on Blackboard and is essential to completing a thesis and the steps that need to be taken after the defense date.

Plagiarism

Plagiarism is prohibited. The definition of plagiarism is "the deliberate or reckless representation of another's words, thoughts, or ideas as one's own without attribution in connection with submission of academic work, whether graded or otherwise." Plagiarism is considered a form of cheating and is thus not accepted. It is considered plagiarism if it is from a friend's text or from a source online or any other written text, and can easily be avoided if you give credit where credit is due. Whenever you cite someone else's ideas or use their language, give the name of the author and the year of publication (APA or Harvard referencing system). For your thesis, your texts will be checked through the plagiarism program "safe assign" on Blackboard. All plagiarism or cheating will be reported and prosecuted through the University.

For an excellent guide on what plagiarism is and how to avoid it, read the document from the Writing Center, University of North Carolina at Chapel Hill (also posted on Blackboard): https://writingcenter.unc.edu/files/2012/09/Plagiarism-The-Writing-Center.pdf

Thesis defense registration

In order to schedule, assign supervisors, inform examiners and opponents etcetera, students must give notice to the course examiner at the latest May 4 (see below Schedule outline). If you haven't given notice, you may have to wait to defend until the next opportunity.

Presence at meetings and seminars

Full-day presence at and active participation during pre-defense and defense seminars is obligatory. However, you only have to be present on the day you present. Exceptions are only made when valid reasons are present and you have notified your supervisor well in advance. Vacation or work are not valid reasons.

You are obliged to come to the group meetings with your supervisor. The time for these meetings is counted as supervision time.

Course examiner

Hanneke Boon, PhD, hanneke.boon@hh.se, Room P335

Supervisors

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Schedule outline 2015

Wk	Day	Time	Topic
4	Jan 21	15.15-17.00	Course introduction
17	April 24	12.00	Submit your preliminary thesis on Blackboard
18	April 28	9.15-17.00	Pre-defense seminar For those that plan on defending in May 2015
19	May 4	12.00	Notify the course examiner whether you plan to defend or not (through Blackboard)
20	May 15	12.00	Submit your final thesis on Blackboard
22	May 25 May 27 May 29	9.15-17.00	Defense dates
23	June 5		Submit your final thesis to DIVA system
TBD	Aug/Sept		Notify the course examiner whether you plan to defend or not
TBD	Aug/Sept		Defense dates

Appendix 1

Opposition Critique Guidelines

Aim of defense:

For the opponent to critique (in a constructive manner) a thesis based on scientific merit in relation to the stated aim. In addition, an opposition is a time to discuss the thesis results and start a dialogue with the thesis respondent.

The main task of the opponent is to bring forward, and discuss merits and shortcomings in the thesis in a scientific, proper and respectful way. The opponent begins with mentioning positive aspects but to be an opponent is also a responsibility to bring forward weaknesses of the work. The respondent shall be given the opportunity to respond to the critique from the opponent and it is important for the respondent to not by instinct take a defensive position, but instead be able to discuss logically with the opponent.

Spelling or grammar mistakes do not need to be commented on during the opposition but a general comment on the writing style can be mentioned. It is however, helpful to mark spelling and other grammar mistakes in the manuscript which will be handed over at the end of the defense.

Some headings that can be useful during the opposition

- **Aim and research questions:** Is the aim of the study clear and precise? What questions does the author try to answer? Are the research questions clearly stated and can they be answered with the chosen method and material?
- **Theory/Background literature:** Is relevant theory/background research used and is it mentioned adequately? Are the chosen references appropriate to the topic? Do they reference too many articles? Too few? Too old? Too many textbooks? Other sources?
- **Method:** Is the chosen method appropriate in regards to the research question? Is it possible to repeat the study with the chosen method? Is the material relevant in regards to size and selection, and in regards to the aim of the study? Do they discuss reliability and validity of the chosen methods?
- **Results:** Do the results answer the research questions? Are the results described in an objective, logical, easy to follow manner? Do text, tables and figures work in conjunction? Are these correctly made and easy to interpret? Are the statistical methods used correctly? Do they explain their statistical methods?
- **Analysis of results:** Are the results connected to theory/background literature? Are the results discussed in relation the research questions and in relation to previous research in the field? Does the author point out weaknesses and limitations in their work? Can the results be generalized? Are the conclusions supported by the data presented? Are the

conclusions scientifically sound and clearly stated? Is there any new results presented in the discussion that wasn't included in the result section?

- **Overall impression:** Is there a red line throughout that is easy to follow? Both in aim/result/discussion/conclusion, but also in lay-out of thesis?

Some minor things to look at can be:

- **Language & Formal style:** Is the work structured and does it follow rules set for a scientific thesis? Are the references appropriate and is the referencing style correct?
- **Title:** Does the title describe the work appropriately?

The opponent writes down their comments and hands them over to the respondent at the end of the opposition as well as e-mails them to the examiner at the latest the day before the opposition. They should be clear, logical, give page and paragraph references.

Appendix 2

Betygskriterier för examensarbete i Biomedicin inriktning fysisk träning BM5001, 15hp, 2015

Examensarbete i biomedicin är ett självständigt arbete som genomförs under tredje året på kandidatprogrammet biomedicin inriktning fysisk träning.

Förväntade studieresultat (lärandemål)

Efter avslutad kurs ska studenterna kunna:

Kunskap och förståelse

L1: Fördjupa och bredda sina kunskaper inom biomedicin inbegripet kunskaper om metoder och aktuella forskningsfrågor, inom en vald problemställning.

Färdighet och förmåga

L2: Självständigt planera och inom givna tidsramar genomföra en vetenskapligt grundad studie inom ett avgränsat biomedicinskt område

L3: Visa förmåga att muntligt och skriftligt redogöra för en vetenskapligt genomförd studie i dialog med olika grupper.

Värderingsförmåga och förhållningssätt

L4: Värdera studiens resultat i förhållande till, forskning, utveckling, och etiska frågeställningar inom det specifika problemområdet och identifiera eget behov av ytterligare kunskap inom området

L5: Visa insikt i vetenskapens roll i samhället och om dess inverkan på människors livsförhållande

L6: Bedöma det egna och andras examensarbeten inom biomedicin med avseende på vetenskaplighet, etiska perspektiv och samhällsnytta

De ovanstående lärandemålen vilar på följande nationella lärandemål ur Högskoleförordningen SFS 1993:100 bilaga 2.

För kandidatexamen skall studenten:

Kunskap och förståelse

- visa kunskap och förståelse inom huvudområdet för utbildningen, inbegripet kunskap om områdets vetenskapliga grund, kunskap om tillämpliga metoder inom området, fördjupning inom någon del av området samt orientering om aktuella forskningsfrågor.

Färdighet och förmåga

visa förmåga att söka, samla, värdera och kritiskt tolka relevant information i en problemställning samt att kritiskt diskutera företeelser, frågeställningar och situationer,
- visa förmåga att självständigt identifiera, formulera och lösa problem samt att genomföra uppgifter inom givna tidsramar,
- visa förmåga att muntligt och skriftligt redogöra för och diskutera information, problem och lösningar i dialog med olika grupper, och
- visa sådan färdighet som fordras för att självständigt arbeta inom det område som utbildningen avser.

Värderingsförmåga och förhållningssätt

- visa förmåga att inom huvudområdet för utbildningen göra bedömningar med hänsyn till relevanta vetenskapliga, samhälleliga och etiska aspekter,
- visa insikt om kunskapens roll i samhället och om människors ansvar för hur den används, och
- visa förmåga att identifiera sitt behov av ytterligare kunskap och att utveckla sin kompetens.

Självständigt arbete (examensarbete)
För kandidatexamen skall studenten inom ramen för kursfordringarna ha fullgjort ett självständigt arbete (examensarbete) om minst 15 högskolepoäng inom huvudområdet för utbildningen.

Examinationsformer

Examensarbetet utförs enskilt. På en särskild slutredovisning granskas examensarbetena vetenskapligt av handledare, examinator och studentopponent.

Undervisningsformer

Undervisningen bedrivs via handledning i grupp och enskilt.

Examination

Som betyg för hel kurs används något av uttrycken Underkänd, Godkänd eller Väl Godkänd

Lärandemål (L) 1-6 utgör tillsammans ett bedömningsområde och examineras genom projektseminarie, skriftligt examensarbete och muntlig och skriftlig opposition på annat examensarbete.

Lärandemål med betygskriterier finns presenterade i tabell 1.

För betyg godkänt på kursen måste alla betygskriterier vara uppfyllda på godkändnivå. För betyget väl godkänd måste dessutom alla betygskriterier på väl godkändnivå vara uppfyllda.

Tabell 1. Lärandemål och betygskriterier för kursen BM5001

Lärandemål *Kunskap och förståelse*	**Kriterier för godkänd**	**Kriterier för väl godkänd**
L1: Fördjupa och bredda sina kunskaper inom biomedicin inbegripet kunskaper om metoder och aktuella forskningsfrågor, inom en vald problemställning.	1. Studenten förklarar och använder för valt område relevanta biomedicinska begrepp, problemställningar och skeenden på ett vetenskapligt korrekt sätt. 2. Studenten beskriver och förklarar med stöd av existerande forskning ett undersökningsområde och formulerar en undersökningsbar kunskapsfråga inom biomedicin. 3. Studenten identifierar och motiverar val av metod som matchar vald frågeställning och kan ange metodens styrkor och svagheter.	1. Studenten förklarar och använder för valt område relevanta biomedicinska begrepp, problemställningar och skeenden på ett vetenskapligt korrekt sätt och visa förståelse för korrekta avgränsningar i det vetenskapliga arbetet 2. Studenten kan försvara vald metod och jämföra den med andra lämpliga metoder.

Färdighet och förmåga		
L2: Självständigt planera och inom givna tidsramar genomföra en vetenskapligt grundad studie inom ett avgränsat biomedicinskt område.	1.Studenten planerar och genomför inom givna tidsramar en vetenskapligt grundad studie. 2.Med utgångspunkt från vald frågeställning och med stöd av relevanta källor och studiens resultat föra en diskussion som leder fram till undersökningens slutsatser. 3.Studenten anger felkällor och osäkerheter i studien. 4.Studenten ger förslag på relevanta uppföljande studier i undersökningsområdet. Studenten påvisar källkritisk medvetenhet, använder relevanta källor, gör korrekta källhänvisningar och följer ett vedertaget system för referenshantering.	Studenten för en kritisk, självständig och fördjupad analys och diskussion som leder till att uppsatsen som helhet visar en mycket god orientering om och fördjupning inom undersökningsområdet.
L3: Visa förmåga att muntligt och skriftligt redogöra för en vetenskapligt genomförd studie i dialog med olika grupper.	1.Studenten använder ett klart och koncist vetenskapligt språkbruk i så väl muntlig som skriftlig framställning.	

	2. Det finns en tydlig röd tråd mellan resultat, analys och studiens frågeställningar, syfte och metod i så väl muntlig som skriftlig framställning. 3.Studenten förklarar, sammanfattar och försvarar undersökningen muntligt och skriftligt för olika grupper på ett intresseväckande och vetenskapligt korrekt sätt.	
Värderingsförmåga och förhållningssätt		
L4: Värdera studiens resultat i förhållande till forskning, utveckling och etiska frågeställningar inom det specifika problemområdet och identifiera eget behov av ytterligare kunskap inom området	1. Studenten jämför och diskuterar resultat av den egna undersökningen med relevanta vetenskapliga studier inom området. 2. Studenten hanterar undersökningsobjekt, källor och eventuell experimentell utrustning enligt etiska riktlinjer, god vetenskaplig sed och svensk lagstiftning. 3. Studenten presenterar resultatet av undersökningen muntligt liksom skriftligt med ett kritiskt förhållningsätt. 4. Rapporten är efter plagiat-kontroll fri från anmärkning.	Studenten värderar med stöd av existerande biomedicinsk forskning resultatet av den egna studien och ger förslag på nya relevanta forskningsfrågor i undersökningsområdet.

L5: Visa insikt i vetenskapens roll i samhället och om dess inverkan på människors livsförhållande	Klargöra hur valt problemområde påverkar människors livsförhållande ur ett samhällsperspektiv	
L6: Bedöma det egna och andras examensarbeten inom biomedicin med avseende på vetenskaplighet, etiska perspektiv och samhällsnytta	Studenten genomför en vetenskapligt grundad opposition genom att identifiera förtjänster och brister samt ger förslag på förbättringar på ett annat självständigt arbete.	Studenten ger en djupodlande kritisk och självständig opposition.

Appendix 3

Rollfördelning i examensarbetet

Detta dokument har framtagits för att tydliggöra olika roller i arbetet med att utarbeta, handleda och examinera ett examensarbete. I ett examensarbete är flera roller inblandade och det är därför viktigt att ha en tydlig bild av hur rollfördelningen ser ut.

Studenten
Studenterna ansvarar för arbetet med examensarbetet och för att slutresultatet uppnår högsta möjliga kvalitet. Studenterna tar fram en final projektplan i samråd med handledare och eventuella externa kontakter. Under arbetets gång ansvarar studenterna för att handledningsmöten planeras (i samråd med handledare) och förbereds så att handledningstiden nyttjas på bästa sätt. Studenten ansvarar för att slutversionen av examensarbetet skickas till plagiatverktyget SafeAssign. Studenterna deltar aktivt i grupphandledning/seminarier, projektseminarium (”pre-defense”) och slutredovisning samt har en roll som opponent på ett annat examensarbete.

Handledaren
Handledarens roll är att initialt vägleda studenten till ett bra upplägg och ett genomförbart examensarbete. Under arbetets gång genomförs handledning utifrån skrivna utkast som diskuteras och kommenteras i grupp eller enskilt. Handledarens roll är att bidra till lärprocessen så att uppställda mål kan uppnås. Handledaren ska inte hjälpa studenten att skriva examensarbetet. Handledaren genomför sluthandledning och avgör i samråd med examinator om examensarbetet är redo för bedömning och kan dessutom också ge examinator underlag för betygssättning.

Examinatorn
Kursansvarig examinator ansvarar för processen kring examensarbetet med uppstart, tilldelning av handledare, planering av obligatoriska moment och att studenterna via Blackboard får den information som behövs för genomförandet. Examinatorn ansvarar för planering av slutredovisning och opposition samt säkerställer plagiatkontroll av examensarbetet. Kursansvarig examinator säkerställer också den vetenskapliga nivån på examensarbetet och ansvarar för betygsättningen efter samråd med handledare, de individuella examensarbetenas examinatorer och eventuella externa kontaktpersoner. Kursansvarig examinator och individuella examensarbetens examinator bör vara disputerad. Examinator och handledare får inte vara samma person.

Externa kontakter

Om examensarbetet genomförs i samarbete med extern partner kan en extern kontaktperson utses. Den externa kontakten ersätter inte handledaren utan kan endast utgöra ett komplement till högskolans handledare. Den externa kontakten kan utgöra ett stöd för studenterna och bör ges tillfälle till att läsa examensarbetet och ge feedback.

Appendix 4

Plagiarism

(Text from: the Writing Center, University of North Carolina at Chapel Hill: https://writingcenter.unc.edu/files/2012/09/Plagiarism-The-Writing-Center.pdf)

This handout explains what plagiarism is and outlines steps students can follow to avoid plagiarizing.

What is plagiarism?
At UNC, plagiarism is defined as "the deliberate or reckless representation of another's words, thoughts, or ideas as one's own without attribution in connection with submission of academic work, whether graded or otherwise." (Instrument of Student Judicial Governance, Section II.B.1.). Because it is considered a form of cheating, the Office of the Dean of Students can punish students who plagiarize with course failure and suspension. Full information can be found on the UNC Honor System page.

Why are my instructors so concerned about plagiarism?
In order to understand plagiarism, it helps to understand the process of sharing and creating ideas in the university. All knowledge is built from previous knowledge. As we read, study, perform experiments, and gather perspectives, we are drawing on other people's ideas. Building on their ideas and experiences, we create our own. When you put your ideas on paper, your instructors want to distinguish between the building block ideas borrowed from other people and your own newly reasoned perspectives or conclusions. You make these distinctions in a written paper by citing the sources for your building block ideas. Providing appropriate citations will also help readers who are interested in your topic find additional, related material to read— in this way, they will be able to build on the work you have done to find sources.

Think of it this way: in the vast majority of assignments you'll get in college, your instructors will ask you to read something (think of this material as the building blocks) and then write a paper in which you analyze one or more aspects of what you have read (think of this as the new structure you build). Essentially, your instructors are asking you to do three things:

Show that you have a clear understanding of the material you've read. Refer to your sources to support the ideas you have developed.
Distinguish your analysis of what you've read from the authors' analyses.

When you cite a source, you are using an expert's ideas as proof or evidence of a new idea that you are trying to communicate to the reader.

In every professional field, experts consider some ideas "common knowledge," but remember that you're not a professional (yet). In fact, you're just learning about those concepts in the course you're taking, so the material you are reading may not yet be "common knowledge" to you. In order to decide if the material you want to use in your paper constitutes "common knowledge," you may find it helpful to ask yourself the following questions:

Did I know this information before I took this course? Did this information/idea come from my own brain?

If you answer "no" to either or both of these questions, then the information is not "common knowledge" to you. In these cases, you need to cite your source(s) and indicate where you first learned this bit of what may be "common knowledge" in the field.

What about paraphrasing?
Paraphrasing means taking another person's ideas and putting those ideas in your own words. Paraphrasing does NOT mean changing a word or two in someone else's sentence, changing the sentence structure while maintaining the original words, or changing a few words to synonyms. If you are tempted to rearrange a sentence in any of these ways, you are writing too close to the original. That's plagiarizing, not paraphrasing.

Paraphrasing is a fine way to use another person's ideas to support your argument as long as you attribute the material to the author and cite the source in the text at the end of the sentence. In order to make sure you are paraphrasing in the first place, take notes from your reading with the book closed. Doing so will make it easier to put the ideas in your own words. When you are unsure if you are writing too close to the original, check with your instructor BEFORE you turn in the paper for a grade. So, just to be clear—do you need to cite when you paraphrase? Yes, you do!

How can I avoid plagiarizing?
Now that you understand what plagiarism is, you're ready to employ the following three simple steps to avoid plagiarizing in your written work.

Step 1: Accentuate the positive. Change your attitude about using citations.

Do you feel that you use too many citations? Too few? Many students worry that if they use too many citations their instructors will think that they're relying too heavily on the source material and therefore not thinking for themselves. In fact, however, using citations allows you to demonstrate clearly how well you understand the course material while also making clear distinctions between what the authors have to say and your analysis of their ideas.

Thus, rather than making your paper look less intellectually sophisticated, using citations allows you to show off your understanding of the material and the assignment. And instead of showing what you don't know, citing your sources provides evidence of what you do know and of the authority behind your knowledge. Just make sure that your paper has a point, main idea, or thesis that is your own and that you organize the source material around that point.

Are you worried that you have too few citations? Double-check your assignment to see if you have been given any indication of the number or kind of source materials expected. Then share your writing with another reader. Do you have enough evidence or proof to support the ideas you put forward? Why should the reader believe the points you have made? Would adding another, expert voice strengthen your argument? Who else agrees or disagrees with the ideas you have written? Have you paraphrased ideas that you have read or heard? If so, you need to cite them. Have you referred to or relied on course material to develop your ideas? If so, you need to cite it as well.

Step 2: How can I keep track of all this information? Improve your note-taking skills.

Once you've reconsidered your position on using citations, you need to rethink your note-taking practices. Taking careful notes is simply the best way to avoid plagiarism. And improving your note-taking skills will also allow you to refine your critical thinking skills. Here's how the process works:

(1) Start by carefully noting all the bibliographic information you'll need for your works cited page. (See #3 for more details on how to determine exactly what information you'll need for different kinds of sources.) If you're photocopying an article or section out of a book or journal, why not photocopy the front pages of the source as well? That way you'll have the bibliographic information if you need it later. If you forget to gather the information for a book, you can usually get it from the library's online card catalogue. Simply pull up the entry for the book you used to see the bibliographic information on that source. If you're working on an article from a journal, you can return to the database from which you got the original citation to find the bibliographic information.

(2) Next, try thinking about your notes as a kind of transitional space between what you've read and what you're preparing to write. Imagine yourself having a conversation with the author of the story/novel/play/poem/article/book you're reading, in which you repeatedly ask yourself the following questions:

What is the author trying to explain?
Why does s/he think these points are important?
How has s/he decided to construct the argument?
How does the structure of the argument affect the reader's response to the author's ideas? How effective is the author's argument?

Adopting this “conversational” approach to note-taking will improve your analysis of the material by leading you to notice not just what the author says, but also how and why the author communicates his or her ideas. This strategy will also help you avoid the very common

temptation of thinking that the author’s way of explaining something is much better than anything you could write. If you are tempted to borrow the author’s language, write your notes with the book closed to ensure that you are putting the ideas into your own words. If you’ve already taken a step away from the author’s words in your notes, you’ll find it easier to use your own words in the paper you write.

(3) Finally, be careful to use quotation marks to distinguish the exact words used by the author from your own words so that when you return to your notes later in the writing process, you won’t have to guess which ideas are yours and which ones came directly from the text. You’ll have to experiment with different note-taking techniques until you find the one that works best for you, but here’s one example of how your notes might look:

James Leoni, trans. Ten Books on Architecture by Leone Battista Alberti. London: Alec Tirani, Ltd., 1955.

BOOK I, CHAPTER X: “Of the Columns and Walls, and Some Observations Relating to the Columns”

(p. 14) Alberti begins by talking about walls, and then says a row of columns is simply “a Wall open and discontinued in several Places;” he says the column supports the roof, and that columns are the most beautiful of the architectural elements; here, he’ll address what columns have in common, and later he’ll discuss their differences.

(p. 14) all columns rest on a plinth (or dye), which supports a base, which supports the column, which is topped by a capital; columns are usually widest at the base, and taper toward the top; Alberti says the column was invented simply to hold up the roof, but men sought to make their buildings “immortal and eternal,” so they embellished columns with architraves, entablatures, etc.

Notice that you can adapt this note-taking strategy to any format—whether you prefer to take notes by hand, on note cards, on your computer, or some other way. For more information on developing an effective note-taking technique, you can consult any grammar handbook. Here are a few particularly helpful ones:

Leonard J. Rosen and Laurence Behren. The Allyn & Bacon Handbook. Boston: Allyn & Bacon, 2000. OR Allyn & Bacon online at: www.abacon.com
Joseph Gibaldi. MLA Handbook for Writers of Research Papers. New York: The Modern Language Association of America, 2003.

Kate L. Turabian. A Manual for Writers of Term Papers, Theses, and Dissertations. Chicago: University of Chicago Press, 1996.

Step 3: So many details, so little time! Locate the appropriate style manual.

Don't worry—no one can remember all the different citation conventions used in all the different university disciplines! Citing your sources appropriately is a matter of:

1. determining which style your instructor wants you to use,
2. finding the appropriate style manual, and
3. copying the "formula" it gives for each type of source you use.

First, carefully read the assignment to determine what citation style your instructor wants you to use (APA, MLA, Chicago, and CSE are the most common). If s/he doesn't specify a citation style in the assignment, check your syllabus, coursepack, and/or Blackboard site. If you can't find the citation style in any of those places, ask your instructor what style s/he prefers.

Second, academic citation styles follow specific formats, so making an educated guess about how to structure your citations and works cited page is usually not a good idea. Instead, find the specified style manual in the reference section of the library, on the reference shelf in the Writing Center, or online.

Finally, style manuals provide easy-to-follow formulas for your citations. For example, the MLA handbook provides the following format for citing a book by a single author:

Author's name. Title of the book. Publication information.

You can use this formula for your own citation by simply plugging in the information called for, following the format of the formula itself. Here's an example of how that might look:

Berlage, Gai Ingham. Women in Baseball: The Forgotten History. Westport: Greenwood, 1994. If you'd like more information on citation styles, see the UNC Libraries citation tutorial.
How can I tell whether I've plagiarized?

If you've followed the above guidelines but still aren't sure whether you've plagiarized, you can double-check your work using the checklist below.

You need to cite your source, even if:

1. you put all direct quotes in quotation marks.
2. you changed the words used by the author into synonyms.
3. you completely paraphrased the ideas to which you referred.
4. your sentence is mostly made up of your own thoughts, but contains a reference to the author's ideas.
5. you mention the author's name in the sentence.

The moral of this handout: When in doubt, give a citation

Works consulted/cited

We consulted these works while writing the original version of this handout. This is not a comprehensive list of resources on the handout's topic, and we encourage you to do your own research to find the latest publications on this topic. Please do not use this list as a model for the format of your own reference list, as it may not match the citation style you are using. For guidance on formatting citations, please see the UNC Libraries citation tutorial.

Alberti, Leone Battista. Ten Books on Architecture. James Leoni, trans. London: Alec Tirani, Ltd., 1955.

Leonard J. Rosen and Laurence Behren. The Allyn & Bacon Handbook. Boston: Allyn & Bacon, 2000. OR Allyn & Bacon online at: www.abacon.com

Joseph Gibaldi. MLA Handbook for Writers of Research Papers. New York: The Modern Language Association of America, 2003.

Kate L. Turabian. A Manual for Writers of Term Papers, Theses, and Dissertations. Chicago: University of Chicago Press, 1996.

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