

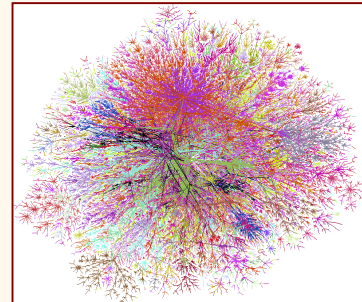
MEDICINSKA INFORMATIKA

Medicinska informatika
akad. god. 2008./09.,
završno predavanje



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Povezivanje...

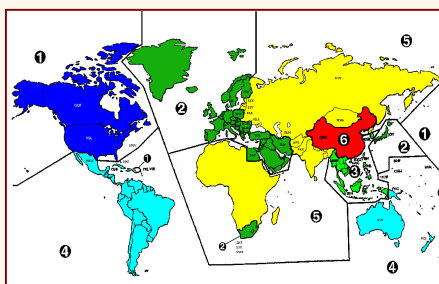


<http://www.cs.bell-labs.com/who/ches/map/>



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

...i razdvajanje ☹

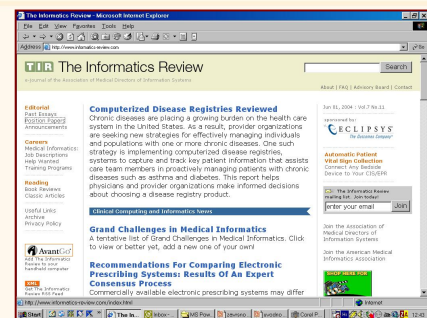


<http://www.unik.no/~robert/hifi/dvd/world.html>



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

E-časopisi



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

E. Coiera, 1998. (TIR)

The computer, the telephone, the Web, video – these, and all that is still to come, are unquestionably powerful tools. **Used badly**, they waste time and money, and dehumanise our interactions with each other. **Used well**, guided by a clear understanding of basic informatics principles, they are neither to be feared, loved nor loathed. **They are simply to be used.**

In the next century, the study of informatics will become as fundamental to the practice of medicine as anatomy has been to the last.

[http://www.informatics-review.com/thoughts/skills.html#Ten essential clinical informatics skills](http://www.informatics-review.com/thoughts/skills.html#Ten%20essential%20clinical%20informatics%20skills)



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Obrazovanje u digitalnoj znanosti (u medicinskim strukama)

- Kako rabiti digitalnu znanost?
(VJEŠTINE)
- Što jest digitalna znanost?
(ZNANJE)

nastavnik
predavač



voditelj
koordinador



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

10 vještina (E. Coiera)

Clinicians should be able to:

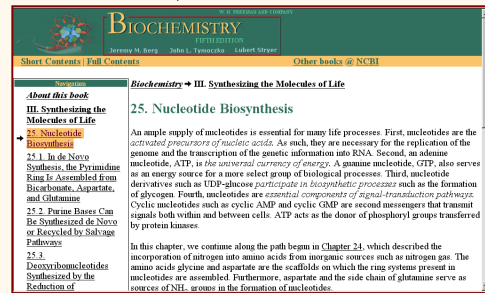
1. Understand the dynamic and uncertain nature of medical knowledge and know how to keep personal knowledge and skills up-to-date
2. Search for and assess knowledge according to the statistical basis of scientific evidence
3. Understand some of the logical and statistical models of the diagnostic process
4. Interpret uncertain clinical data and deal with artefact and error
5. Analyse and structure clinical decisions in terms of risks and benefits
6. Adapt and apply clinical knowledge to the individual circumstances of patients
7. Access, assess, select and apply a treatment guideline; adapt it to local circumstances; and communicate and record variations in treatment plan and outcome
8. Structure and record clinical data in a form appropriate for the immediate clinical task, for communication with colleagues, or for epidemiological purposes
9. Select and utilize the most appropriate communication method for a given task (eg, face-to-face conversation, telephone, e-mail, video, voice-mail, letter)
10. Structure and communicate messages in a manner most suited to the recipient, task and chosen communication medium.



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



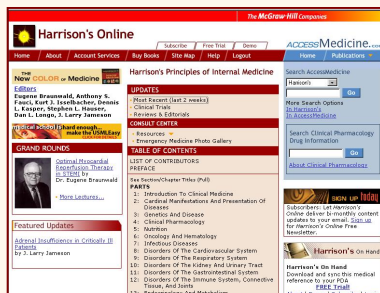
E-udžbenici, \$



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



E-udžbenici, \$



<http://www.harrisonsonline.com/>

Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Izravno učenje s interneta



<http://www.diagnosticimaging.com/cme/articles/019.pdf>

Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



<http://www.diagnosticimaging.com/cme/articles/019.pdf> - Microsoft Internet Explorer

This process is still in place for other clinically approved FFDM systems for which an accreditation module has not yet been developed. New users of the GE Senographe 2000D FFDM system should register their new digital units with the ACR instead of the FDA.

Now that accreditation of FFDM is possible, stand-alone digital sites can be accredited by the ACR and certified by the FDA. New facilities wanting to start up with FFDM should notify the ACR as soon as possible before opening so that they can receive the appropriate application materials.

For sites already ACR accredited based on SFM systems, a new process is in place for registering new SFM and FFDM units. The facility must have an equipment evaluation of the new units performed by a qualified medical physicist.

specific tests, test frequencies, and action limits, according to the manufacturer's QC procedures. Just as for SFM, QC procedures and results are reviewed during the annual ACR inspection.

References

1. Hase AM, Yaffe MJ. Screen film and digital mammography. In: Fogel RM, Radiologic science of North American breast imaging. Philadelphia: WB Saunders, 2000;86:4, 873-880.
2. Hendrick RE, Borne EA. Operating techniques in screen film mammography. In: Fogel RM, Radiologic science of North American breast imaging. Philadelphia: WB Saunders, 2000;86:4, 703-714.
3. Hendrick RE, Borne EA. Operating the selection of film and film processing in screen film imaging. In: Hase AM, ed. Advances in film processing: notes, techniques, and quality control in medical imaging. Madison, WI: Medical Physics Publishing, 2001;15:1-126.
4. Borne EA, Hendrick RE, Connor GA. Performance comparison of full-field digital mammography to screen film mammography in a clinical setting. Medical Physics, 2002;29:838-854.
5. Hendrick RE, Borne EA. Full-field digital mammography quality control manual. Chicago: Pharmaceutical Technology, 2001.
6. GE Medical Systems. Senographe 2000D Quality Assurance Protocol manual 227500-200, 40 or Nov. 22, 2000.
7. Levin DM, Hendrick RE. FDA's 510(k) of full-field digital mammography to screen film mammography for cancer detection: results of 4942 paired examinations. Radiology, 2001;218:872-880.
8. Levin DM, O'Donnell CA, Hendrick RE, et al. Clinical comparison of full-field digital mammography to screen film mammography. Radiology, 2001.

FIGURE 6. Contrast setting. A Change of contrast settings shows improved conspicuity of a benign fibroadenoma. B: High contrast setting plus magnification shows improved definition of a benign fibroadenoma.

A: GE Medical Systems. Senographe 2000D Quality Assurance Protocol manual 227500-200, 40 or Nov. 22, 2000.

FIGURE 6. Contrast setting. A Change of contrast settings shows improved conspicuity of a benign fibroadenoma. B: High contrast setting plus magnification shows improved definition of a benign fibroadenoma.

...s testom znanja



<http://www.mhsource.com/diagnostic/>



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



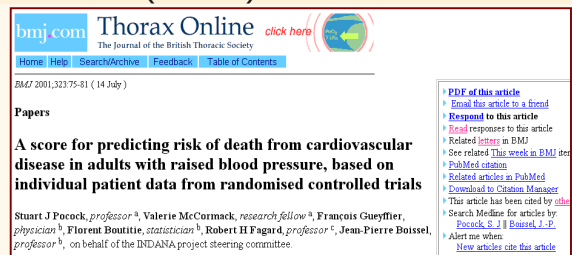
... i u Hrvatskoj



<http://medix.com.hr>

Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Izravno (on-line)...



<http://bmj.com/cgi/content/full/323/7304/75>

<http://www.riskscore.org.uk/>

Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

E-tromboza!

- e-Thrombosis, a new threat for the 21st century
- The risk of developing life-threatening blood clots from sitting for long periods at a computer was revealed today in a case report from New Zealand. A young man who spent up to 18 hours a day sitting at his computer nearly died after developing a massive blood clot that formed in his leg veins, broke off and travelled to his lungs (pulmonary embolism).

TIR, Vol. 6 No. 7



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Studentski seminar

- prikazi na računalu:
 - količina sadržaja (vrijeme na raspolaganju)
 - izradba "na brzinu" ☹
 - plagiranje ☹☹☹
 - preslika izvornog teksta – loše!
 - važno znati i razumijeti sadržaj, poznavati sve izraze, kratice i tumačenja
 - jako bitno: hrvatski književni jezik! ☺
 - šarenilo, animacije – nepotrebno!



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Stud. seminar – pismenost

...slijedi da će se (V) sastanak (Journal Club) Katedre za informatiku održati u četvrtak (3. lipnja 04.) u 19 sati u informatičkoj učionici. Obrađivat će se poglavlja prema sljedećem rasporedu: Gordana B. - 10. poglavlje, Lidija B.Z. - 11. poglavlje i Mladen P. - 12. poglavlje. Izvor podataka: "Uvod u znanstveni rad u medicini", Med. naklada, III. izd. (žuto), 2004. god. Podrazumijeva se da svi učesnici pomno prouče sva navedena poglavlja i aktivno se uključe u raspravu. Sdačno.



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Lidija Bilić - Zulle

Stud. seminar – pismenost

...slijedi da će se IV. sastanak (Journal Club) Katedre za informatiku održati u četvrtak, 16. lipnja 05., u 19 sati u informatičkoj učionici. Obrađivat će se poglavlja prema sljedećem rasporedu: Gordana B. - 10. poglavlje, Lidija B.Z. - 11. poglavlje i Mladen P. - 12. poglavlje. Izvor podataka: "Uvod u znanstveni rad u medicini", Med. naklada, III. izd. (žuto), 2004. god. Podrazumijeva se da svi učesnici pomno prouče sva navedena poglavlja i aktivno se uključe u raspravu. Srdačno,



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

Lidija Bilić-Zulle

Studentski seminari

- početak
 - pozdrav, predstavljanje
 - "ja, nažalost, nisam..."
 - "bit ću kratak..."
- završetak, zadnja rečenica, zaključak, pitanje...
 - "i to je to"
- zanimanje za to što se radi
- timski rad



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Studentski seminari, izlaganja

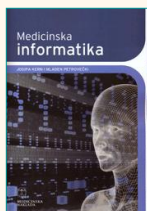
- tekst – previše ili premalo?
- količina cjelokupne materije
- didaktički sadržaji (učenje)
- izlaganje, pogled ka...
- primjeri izvan zadanoga teksta
- slike (grafički prikaz)
- vrijeme izlaganja



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Ispit: gradivo



- udžbenik
- nastava
 - seminari
 - vježbe



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Dopunsko gradivo

- Degoulet P, Fieschi M.
Introduction to Clinical Informatics
Springer, 1997.
- Van Bommel JH, Musen MA.
Handbook of Medical Informatics
Springer, 1997.
http://www.mieur.nl/mihandbook/r_3_2/handbook/home.htm



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Ispitna razdoblja

- mrežne stranice Fakulteta
- pismeni ispit: 45 minuta
- rezultati: 30 minuta nakon ispita
- usmeni ispit:
 - nije obavezan
 - odmah nakon objave rezultata
- upis ocjena: odmah nakon objavljivanja rezultata

Pozornost: prijava i odjava ispita – Studis!



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Medicinska informatika

<http://mi.medri.hr/>

mi@medri.hr

Studenti se primaju **svakim danom** od 12-14 sati

Konzultacije **utorkom i četvrtkom** 14-16 sati



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Ispit

- pismeni:

- test, 22 pitanja, 45 min
- primjer testa na mrežnim stranicama
- pribrajanje plus/minus bodova stečenih na nastavi

- usmeni:

- 5 pitanja
- objavljena na mrežnim stranicama

Bodova	Ocjena
0 - 11	nedovoljan
12 - 13	dovoljan
14 - 16	dobar
17 - 19	vrlo dobar
20 -	izvrstan



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku



Hvala na pozornosti...

...i puno uspjeha na ispitu.

*Molim još trenutak strpljenja za
studentsku anketu...*



Medicinski fakultet Sveučilišta u Rijeci Katedra za medicinsku informatiku

